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EDUCATION DEPT

VOCATIONAL EDUCATION

ITS THEORY, ADMINISTRATION AND PRACTICE

THE
PROBLEM OF VOCATIONAL EDUCATION
BY DAVID SNEDDEN
COMMISSIONER OF EDUCATION FOR MASSACHUSETTS

THE PEOPLE'S SCHOOL:
A STUDY IN VOCATIONAL TRAINING
BY RUTH MARY WEEKS

THE IMPROVEMENT OF RURAL SCHOOLS
BY ELLWOOD P. CUBBERLEY
PROFESSOR OF EDUCATION IN LELAND STANFORD JUNIOR UNIVERSITY

As originally published in separate volumes
of the Riverside Educational
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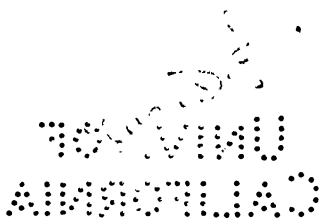

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FOREWORD

AMERICAN public education is confronted by problems growing out of public demands for the enrichment and improvement of types of instruction already well established in high and elementary schools; but it also faces a variety of new problems involved in the current social demands for forms of education not hitherto generally carried on in schools.

Vocational education is one of these new problems. Almost every agency, in any way identified with the improvement of social conditions, voices, to-day, a demand for better vocational education. The earnestness and magnitude of the public demand for genuine training for vocational usefulness, as expressed in addresses made at public gatherings of all sorts, as emphasized by local, state, and national associations organized to promote social well-being, and as now rapidly crystallizing in definite legislation and detailed administrative programs, greatly resembles the popular demand for free public schools for the teaching of all the people, which manifested it-

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self in civilized countries in the hundred years between 1750 and 1850.

It is of the utmost importance that educators in all fields, — teachers in kindergartens and in elementary and high schools, and principals and superintendents, — as well as interested laymen, should familiarize themselves with the social demands which are forcing and shaping the development of vocational education, and with the issues and concrete proposals that are now daily coming to the front in connection with that development. It is clear that vocational education is no less the affair of the country community than of the metropolitan district, — that it is concerned no less with the making of the successful farmer and housewife than with the training of the craftsman and the clerk. The whole educative process can be truly effective only when all teachers and administrators connected with its various phases mutually understand each other's points of view, proposals, and practical programs. Only thus can a proper coördination of individual efforts be realized and concerted progress towards a really efficient system of education be made.

It is to meet the widespread demand for a helpful book on Vocational Education, that three

volumes from the Riverside Educational Monographs treating of different phases of this subject have been brought together here. The three contributors approach the general problem of a more efficient and a better functioning system of education from three different angles, but their goal is the same — a richer and more useful educational equipment for the American boy and girl on reaching the age of self-direction and self-support. Miss Weeks surveys the whole field of education and stresses needed enlargements and modifications in the general plan; Professor Cubberley writes with the defects of current rural education clearly in mind; while the present writer seeks specific formulations of the principles which reason and experience seem to demand, as a basis for vocational education as a distinctive process.

It is hoped that this book will afford substantial help to all who are interested in solving the problem of vocational education; and that its use may lead to broader vision, clearer thinking, more sympathetic comprehension, and especially more fruitful action.

DAVID SNEDDEN.

THE PROBLEM OF VOCATIONAL EDUCATION

BY

DAVID SNEDDEN, PH.D.

COMMISSIONER OF EDUCATION FOR MASSACHUSETTS

INTRODUCTION

IT is life which trains men — life abounding in deeds and thoughts, among men and things. Wherever there is vital interaction between a mind and its world there is real education. Educative power is, thus, broadly distributed. Its centres of influence are the social institutions — school, home, church, vocation, and neighborhood life. Together they bear the total work of training men, with all the economy and efficiency which comes through a division of labor. In proportion to the relative strength and weakness of their structures, they supplement and reinforce one another.

This distribution of educative power among the social institutions is by no means a fixed division of burdens, set once and for all by tradition or reason. The needs of society lay their heavy demands now upon one agent, now upon another. And in the shifting currents of social progress, some institutions once powerful are left weakened, if not helpless, while other institutions wax strong to meet the demands of the time. The homes of the urban industrial classes have

not the moral influence over children exercised by the family life of the farmer; the church grips fewer members with its theological doctrines than it did a century ago; the trades do less for their apprentices in the modern factory than they did when lodged in the household; the press has more influence; libraries are more plentiful; and the school has grown to be a modern giant where once it was a puny babe. The same old institutional forces beat upon the nervous systems of men, but the relative distribution of their work has changed, and is changing.

In all these variations of influence, one striking tendency stands out clearly: As the agencies for incidental and informal education become incapable of training men for their complex environment, society, becoming increasingly self-conscious, gathers up the neglected functions and assigns them to the school, the one institution entirely under its control. As church and family life ceases to keep pace with the moral demands of our intricate social life, the problem of moral education becomes conspicuous in the schools. As the work and play of children, under the conditions of city life, become restricted so as to deprive them of robust physical activities in the fresh air and sunshine, the school is called upon

to combat the danger with systematic physical training. As factory and shop employment becomes specialized and scientific, and the system of apprenticeship fails to make good workmen, the obligation to train efficient employees is thrust upon the schools.

Just now the shifting of vocational education from the field of industry to the school is the crucial problem of our school organization. The schoolmaster is confronted with the task of dealing with a problem alien to his experiences and contrary to his traditions. Our schools have always been dominantly cultural in their aims, but the new vocational training must be practical. The old education, in order to maintain national solidarity, dealt with a common stock of facts, habits, and ideals necessary to all men; the newer type of training, which is to supplement this traditional culture, is as variable and as specialized as men's occupations.

A thousand difficult questions are raised that school tradition cannot answer. The schoolmaster must grope for his solutions in the few established facts of his new case and build new methods, which will often be radical departures from all that his conservative mind has known and revered in scholastic standards. In accept-

ing responsibility for the vocational training of American children, the school plunges itself into a period of transition, in which old ideals are futile and new ideals but half-discovered. Clear thinking, the great need of the moment, is obscured by the controversies that inevitably arise when two sets of traditions, born of two separate institutions, are suddenly thrust together in a conflict which dulls tolerance, increases vehemence, and destroys poise. Only slowly, and under careful leadership, are the fundamental lines of solution laid bare.

Already, however, the fundamental principles that must guide us in the organization of vocational education have been revealed. A broad social point of view, more inclusive than the narrower visions of either the traditional schoolmaster or the industrial leader, tempers local traditions, reconciles opposition, and constructs new policies. A close study of experience at home and abroad in the matter of industrial training is concretely suggestive of what can and cannot be done in the domain of organization and teaching method. Such a measure of our educational experience in vocational training, as may be conservatively presented at the present time, is here outlined, with suggestive interpretations and

clarifications of the necessary terminology. It is offered in the faith that it will be of practical assistance in leading both the public and the professional mind into safe channels of thought and action.

THE PROBLEM OF VOCATIONAL EDUCATION

Some General Distinctions

If we consider the educative process broadly, we discover that a variety of agencies contribute to it. Under ordinary circumstances, the child learns writing in the school, language in the home, religious ideas in the church, games on the playground, and practical skill in the workshop. The theatre, the newspaper, and the club also contribute to his stock of knowledge, ideals, and habits. Within limits, the educative function of these various institutions is specialized. In the home, the child acquires the fundamentals of moral training, as well as a variety of physical habits and accomplishments. The home being woman's chief workshop, the girl acquires there also the knowledge and skill that make for her eventual vocational efficiency. Some homes also contribute the manners, interests, tastes, and knowledge that we call culture. In the workshop or on the farm, the boy ordinarily acquires the kind of education that eventually fits him to earn

a livelihood, to be a producer. The school gives its share of education in the school arts (reading, writing, number, drawing, etc.), and the beginnings of literature, history, and science, as elements of culture. The playground gives not only skill and means of physical development, but on it are developed a variety of the habits and attitudes which are moral or social in their nature. The newspaper, library, and the stage give not only a range of knowledge, good or bad, but also contribute to the unfoldment of vocational and social ideals and appreciations.

A further examination of the entire educative process will show that, as developed by each of the above agencies, it varies largely in degrees of purposiveness and artificiality. The child learns the family language through the simple and easy exercise of the instincts of imitation; the beginnings of vernacular language require no salaried teacher. On the other hand, the teaching of Greek requires specially trained teachers, and a conscious adaptation of means to ends; it presents the aspects of an artificial and regulated process. The normal child on the playground, with no oversight, and no artificial direction, acquires a wide range of powers and knowledge; but special instruction and appliances are neces-

sary to teach military drill or various forms of gymnastics. The teaching of reading is a process requiring usually much skill and conscious method; but once the mechanics are acquired, the growth of reading habits and the acquisition of knowledge in this field may proceed to a certain extent without teachers in an environment of books and newspapers. The boy on the farm acquires many forms of vocational skill with practically no conscious or purposive teaching; but the metal-worker's art, and the engineer's knowledge require careful and expensive education of an artificially organized kind. We thus see that a consideration of the educative process in any field requires that we consider the learning which is possible without expensive and purposive adjustments (unorganized education), and that which in greater or less degree demands them (organized education).

Again we may consider the entire educative process from the standpoint of the various ends or purposes which may be kept in view in selecting and appraising means and methods. All ordinary education readily lends itself to a fourfold division in this connection. (a) There is the kind of education whose chief aim is to produce and preserve bodily efficiency, such as health,

strength, and working power. This we call broadly, physical education. (b) Next is the kind of education whose chief aim is to promote the capacity to earn a living, or, expressed in more social terms, the capacity to do one's share of the productive work of the world. (c) A third form of education is that designed primarily to fit the individual to live among his fellows. Religious education, moral instruction, and training in civics contribute to this end. (d) There is furthermore the kind of education that aims to develop intellectual and æsthetic capacities, apart from any practical use to which these may be put. This education is frequently designated by the term "cultural," but in a somewhat special sense of that word. The two last divisions, which contribute respectively to the improvement of social life and to the development of personal culture, will in this discussion be grouped together under the general designation, "liberal education." That education whose chief aim is to fit for productive capacity will be designated as "vocational."

What is Liberal Education?

Historically speaking, a liberal education is that which aims to broaden the intellectual and emotional horizon of the individual, and espe-

cially in those fields that are not involved in the earning of a livelihood. Schools of liberal arts have always sought to remove youths for some time from the pressing necessities of practical life, and to open up to them the traditions, sciences, and arts which are part of the common heritage. We commonly associate the idea of liberal education with leisure, because some leisure is and has been necessary to its acquisition, and in the leisure periods of life liberal education finds its greatest opportunities for expression and application. It is the aim of liberal education to give mastery of those arts — reading, writing, number, drawing — which constitute the open doors to the world's stock of knowledge and ideals; and to add the beginnings of those studies — history, literature, science, art — which contribute to the enlightenment and enlargement of the individual, for the purpose both of personal gratification and enjoyment, and of giving him the outlook, the ideals, and the knowledge which render him a better member of the social group to which he belongs.

Liberal education may be interpreted as that which concerns itself with the consuming, as opposed to the productive processes in life. Each individual uses in greater or less degree, accord-

ing to his cultivation and social capacity, the world's stock of literature, history, music, art, science, and human associations, as well as the embodiments of these in more material forms. It is the function of liberal education to teach persons how to use or consume to the best individual or social advantage the work of others. Liberal education is not primarily concerned with the making of the efficient producer, although it makes important indirect contributions to that end; but it is vocational education which aims to train the producer as such, and it looks primarily towards specialization. It has, as will be shown later, its own pedagogy; and its methods may even be in opposition to those of liberal education.

Those teachers and leaders, who have developed for the world its systems of liberal education, have often felt obliged to preach a certain unworldliness to their disciples. To them, as to the religious devotees of all ages, the practical affairs of life were apt to be associated with something that was common and vulgar. The schoolmaster of the past not only was not a practical man, but, to a certain extent, his success in his work depended upon his contempt for things practical. It was his mission to uphold the de-

sirability of those activities which are not connected with bread-winning, and which, at least from a short-sighted point of view, are even in opposition to it. The home and the shop, where the practical affairs of life controlled, were always calling the schoolmaster's followers away from him; consequently, in time he grew to distrust them, and naturally to undervalue their part in the integral process of the development of the individual.

In these later days, we have learned more about the psychological side of liberal education. We have discovered that, so far as large numbers of individuals are concerned, the truest form of liberal education does not consist in dealing with those things which are most remote from the practical affairs of daily life. But it nevertheless remains true that there lingers a considerable hostility, on the part of those who promote liberal education, to that teaching and those activities which are controlled by the obvious necessity of contributing to the world's practical work. A man may not be trained as a bookkeeper, or a machinist, or a farmer, at the same time that he is learning to be a student and lover of music. For him who would indulge in the pleasures of literature, time must be set apart from the prac-

tical affairs of life. Too early devotion to breadwinning occupations, even as a learner, may deprive the boy or girl of the opportunities to open doors of science, art, literature, history, and social knowledge. Consequently, we may affirm that not only does the schoolmaster still inherit an opposition to vocational education, but within limits, his opposition is justified by the fact that liberal education and vocational education represent somewhat different aims, and, historically speaking, involve different systems of pedagogy. As will be shown later, each contributes somewhat to the other; but in spite of the demands of the practical man, the world needs more, rather than less, of liberal education, provided it does not close the door to ultimate vocational efficiency.

What is Vocational Education?

In vocational education, the choice of materials and methods is primarily determined by the necessities of some of the numerous callings or groups of related callings, into which the workers of the world have divided themselves. That vocational education which is specialized to the preparation of lawyers, physicians, and teachers, we call professional; that which is designed to train the bookkeeper, clerk, stenographer, or commer-

cial traveler, including business leadership, we call commercial; that which is organized with reference to the needs of the bricklayer, the machinist, the shoemaker, the metal-worker, the factory hand, and the higher manufacturing pursuits, we call industrial education; that which conveys skill and knowledge looking to the tillage of the soil and the management of domestic animals, we call agricultural; and that which teaches the girl dressmaking, cooking, and management of the home, we call education in the household arts.

In some form or other, vocational education is older than liberal education, for the simple reason that men have always had to have occupations involving more or less skill, by which they could earn a livelihood. In the primitive wilderness, the boy followed his father in hunting and fishing and, in time, by processes of imitation and suggestion, coupled with the learning which comes from trial and error, he became himself a fairly efficient hunter or fisherman. At the same time, the girl was at work with her mother, acquiring the simple arts of preparing food, dressing skins, and tilling the soil, which were the woman's contributions to the necessary work of the time. By and by, some of the arts became highly complex, and the processes of transmitting them from

father to son necessitated better organization. There grew up in the ancient crafts the system of apprenticeship, which directed and organized the efforts of the young learner. The apprenticeship system, as inherited by certain of the great vocations of the Middle Ages, was undoubtedly the most perfect system of vocational education that the world has ever seen.

From what has been said, it is obvious that other agencies than schools have long been responsible for vocational education. The home was the first great instrumentality to this end. This was supplemented and, at times, succeeded by the systems of apprenticeship which have been mainly carried out, under the sanction of the law, by private or philanthropic agencies. Society has always recognized the very great necessity of some form of vocational education, but both the interests and capacities of those concerned have commonly made it possible to dispense with State control and support of it. Private and philanthropic agencies have usually been sufficient.

It is true that certain of the higher vocations have long been acquired under school conditions and, not infrequently, at public expense. The mediæval universities had their professional schools of law, medicine, and theology. The mili-

tary education of leaders was long ago made a national obligation. Not a small part of the preparation of architects, artists, and, sometimes, literary leaders, has been deliberately assumed by governing bodies. In America, where private and philanthropic effort was not sufficient, even the national government has assisted in the founding of schools of agriculture and engineering — essentially schools of higher vocational education. Three fourths of a century ago, Massachusetts began to prepare at public expense teachers for the public schools, — a special form of vocational education. In all these instances, the State has stepped in to supply a well-defined need in fields where private effort did not suffice. The State did not do this for the sake of the individuals who were to be educated, but in its own interest, inasmuch as it greatly needed these highly trained leaders.

But in another field, society early found public action necessary for the development of vocational education. There are those unfortunates — delinquents, dependents, and defectives — for whom the home no longer exists, or for whom the home is a wholly insufficient instrument of education. First under philanthropy, and then under State action, schools arose for the purpose of giving

what was conceived to be the necessary education for these classes. But liberal education was soon found to be inadequate, because it left the individual unprepared for the practical affairs of life: so in almost all cases, institutions attempting the education of the orphan, the cripple, the deaf, the blind, and the young delinquent, have found it necessary to evolve vocational education. These institutions have done a remarkable amount of experimenting, and the results of their efforts, inadequate though they yet be, are worthy of profound study on the part of all who are interested in the general theory of vocational education.

In another field, vocational education under school conditions has justified itself. At the close of the Civil War, the social life and organization of the negro people of the South were in a badly disorganized condition. Family relationships had been much impaired, and were frequently non-existent. In other words, the home as an agency of education, vocational or otherwise, was unable to perform its customary functions. Apprenticeship agencies had not developed; consequently, the acquisition of vocational skill and interest was not provided for among the negroes. The most successful schools that grew up to meet this need were those

which offered both liberal and vocational education, and in a sense made the latter the groundwork for the former. In the best negro schools of the South to-day, one will find many vocations taught in a very practical and effective manner, and it is generally conceded that the social effects of this training are genuinely worth while.

We may sum up by saying that the education whose controlling motive in the choice of means and methods is to prepare for productive efficiency is vocational; that vocational education, more or less unorganized and resting largely on native instincts and capacity, has always existed; that it tends to be organized under school conditions only where special demands or necessities exist; and that from the standpoint of social necessity, vocational education given by some agency is indispensable.

The Modern Social Need of Vocational Education under School Conditions

It must be acknowledged that there is abroad in all civilized countries a growing conviction that vocational education should be better organized and more efficient. If this conviction is well founded, it rests upon one or both of two conditions: Either the older agencies — the home, the

shop, and other forms of participation in productive industry—have lost their efficiency; or else the demands of modern life are changing, and imposing requirements which can be no longer met by these agencies. An analysis of the various types of productive effort will show that in some cases one, and in some the other, condition prevails; while in not a few instances, the contemporary situation is the result, on the one hand, of the decay, in old institutions, of vocational teaching, accompanied by a corresponding increase in the complexity and more scientific character of the industries themselves.

It is a matter of common observation, for example, that the apprenticeship system in many trades has been rendered ineffective by the disappearance of the old form of industry in its complicated form. What is known as the factory method of production has to a large extent eliminated the handicrafts in which apprenticeship had attained its better development. Specialized production prevents the shop from offering opportunities for a rounded or efficient vocational education.

On the other hand, the home as an educational agency breaks down in those cases where the industry is centralized, and the growing

child no longer participates in the processes carried on in proximity to the home. Under more primitive industrial conditions, the weaver, the metal-worker, the baker, the cabinetmaker, the blacksmith, and the printer worked in or adjacent to the home; the boy early became an assistant and with alert instincts soon acquired a considerable insight and experience, which contributed a valuable foundation for subsequent study. But the urban home offers no such opportunities; the father goes far away to his work, and, from the boy's point of view, the most conspicuous fact about the factory, is the sign of "No Admittance" over the door. Here we have a well-defined instance of the loss on the part of the home of its power to perform its part in the educational process.

The farm furnishes an instance of another kind. It has always been regarded as a valuable agency in vocational education, because of the richness of experience, and the necessary obligation for participation in productive industry to be found there. The farm of to-day is, at its best, as effective as it has ever been to transmit from father to son the simple arts of agriculture and stock-management.

But modern agriculture has tended to become

more than a simple art; it is increasingly a field of applied science. The father of to-day may be fairly competent in the old type of farming, but be quite incompetent to convey to his son the scientific principles and practices on which the new and successful type of agriculture must rest. The tillage of the soil, the selection of seed, the rotation of crops, the destruction of insect pests, the harvesting and curing of various products, the feeding of stock, the packing and marketing of things to be sold, — all these involve more and more a kind of scientific insight and training, which can be acquired only under special conditions of education. Here the home has not declined in efficiency, but the demands of modern life are such that it can no longer meet the modern need for vocational education.

Everywhere the social worker is confronted by deplorable consequences of these developments of the modern economic system. These are the incidents and not the necessary products of that system, however, and it would be the sheerest folly to desire to restore the old and less effective forms of production for the sake of the educational possibilities which they contained. Everywhere we see thousands of boys growing up through the critical years, with no

opportunity for effective training for a vocation. They enter the non-educative occupations only to emerge therefrom as handicapped, unskilled laborers. Everywhere under city conditions, we find girls less and less qualified to enter on home-making, because of the lack of educational opportunities in this field, for the want of which the home can, in relatively few instances, be held responsible. The agricultural population of competing areas succeeds only in proportion as the opportunities for agricultural education have been made available to considerable numbers of those who choose this field of productive effort. In many lines of modern industry as practised in the United States, only the lower forms succeed, owing to absence of skilled labor. American manufacturers do not choose unskilled labor, but have been compelled, in many instances, to adapt themselves to it, wasteful and unsatisfactory though the process may be.

The evidence that the old agencies of vocational education — the home, the shop, and other means of participation in productive industry — are no longer sufficient, could be multiplied. It is one of the certain social facts of our age. There can be little doubt that, in the process of social evolution, the time has arrived when voca-

tional, as well as liberal education must be conferred, so far as the large majority of people are concerned, by institutions especially devoted to this end. But these institutions must be schools. They must be specially organized for the purpose of this education, and they must select their courses and methods and teaching staff with this end in view. In other words, the period when vocational education must, of necessity, be carried on under school conditions has arrived, so far as the majority of callings are concerned, as it arrived decades ago in the matter of professional education, which is only one division of vocational education.

Should the State Support Schools for Vocational Education?

It is a significant fact that liberal education has attained its profoundest development under the auspices of the State. As long as society in its corporate capacity refused to interfere in this field, liberal education was a matter for the select few — the so-called leisure class. We well know the history of the evolution of the State's support and control of liberal education. Prior to the Reformation, the family and philanthropy (largely represented by the church) did good service in

this field, but after the Reformation, it was seen by those who were concerned in producing in society the largest number of able citizens, that the State itself must guarantee the opportunities for liberal education to all. Hence evolved the public school system, from its early beginnings in America and Europe into the magnificent institutions of to-day. Under public support, were first offered the opportunities for the simple school arts; but the public school system has gradually been extended to include all that which is now comprised under the conception of secondary education, and in many parts of the world, also includes the higher, or collegiate stages of liberal education. The policy of the State in this field in all civilized countries has been distinctly opposed to the principle of individualism, or *laissez faire*. More and more the competition of public effort has made difficult, if not impossible, private activity in the conduct of schools. More and more, the schools, the teachers, the material equipment of elementary, secondary, and higher liberal education, have been made freely available to the youth of the community. If the principle be called socialistic, the modern civilized State has committed itself certainly to a highly socialistic policy in liberal education, and it has

pursued this policy, partly out of regard for the individual, but largely animated by the spirit of the higher social self-preservation.

During the same time, however, with reference to the education which could be called vocational, the modern State has, with certain exceptions, followed if anything an opposite policy. It is true, as previously indicated, that there have been fostered public professional schools, normal schools, and those for the higher agricultural and engineering callings; and that the State has made vocational education a part of its contribution to the education of the mass of helpless children of the community; but, in all other respects, America and Great Britain, and to some extent the continental European nations, have only grudgingly recognized any obligation on the part of the State to lend its aid to a development of vocational education, as it does to that of other forms. Philanthropy has contributed to the establishment of some schools and in certain directions, as in commercial education, private effort for gain has been sufficient to procure some very respectable developments. On the whole, however, it seems to remain true that vocational education in schools under private or philanthropic effort will remain as circumscribed and partial as was

liberal education before the State entered the field.

Within recent decades, the continental European countries have increasingly assumed responsibility for vocational education under State support and control. The story of this needs no elaboration here, but it is a fact that in Germany, Denmark, Switzerland, France, Norway, and Sweden, a great variety of schools with vocational intent have arisen, which claim and obtain substantial aid from the State. To a certain extent, Germany has made the acquisition of vocational training an obligatory matter which the family may not disregard.

In America there is a growing conviction, on the one hand, that vocational education under school conditions is a necessity for the great majority of workers, and on the other, that these schools can be provided adequately only by State support. It is a generally accepted political principle that the State should not perform those functions which private effort can willingly and efficiently accomplish; that the State should reserve as its province those fields of human necessity where private and philanthropic powers are insufficient to the social needs of the time. It is from this point of view that the desirability of

State action in the sphere of vocational education must be judged. We have first to answer the question: Is vocational education a social necessity? and in the second place: Can other agencies than the State effectively carry it on? A variety of keen social observers have practically come to the conclusion that State action is now necessary under American conditions in this field. They are convinced that the safety of the State and the happiness of individuals demand a better vocational education than is now obtainable; they cannot see that the older non-school institutions are or can be made competent to this end; they are convinced that, under the conditions as they exist in a large majority of callings, vocational education must be obtained under school conditions; and they believe that these can be successfully developed, maintained, and controlled only by that agency which expresses the collective wisdom and power of society, namely, the State.

Types of Vocational Education

For convenience of discussion, it is desirable to classify the callings, into which nearly all men and women enter, into five great divisions.[1] These are: —

[1] In current discussion in France, a sixth division — the marine callings — is made.

(*a*) The professional;
(*b*) The commercial;
(*c*) The agricultural;
(*d*) The industrial, or those connected with manufacturing and the mechanic arts;
(*e*) The household.

It is obvious that each one of these great divisions possesses a number of distinctive characteristics. The professional callings are noted for the elaborate development of the educational means to be employed in them, and the length of time given to preparation for them. The commercial callings range from those into which girls and boys enter at the age of ten or twelve — street trading, department store work, and the like — to those which are, in themselves, *quasi* professions. The agricultural group comprises a variety of specialized occupations, involving tillage of the soil, care of animals, and the like; also ranging in complexity from the relatively simple and unskilled to those which involve almost professional capacity. The most complex group is that here called the industrial, — embracing the great variety of crafts, trades, and manufacturing pursuits. As is well known, these range from the highly specialized occupations, into which children, women, and untrained men may enter with little or

no preparation, to the higher mechanical and engineering callings which possess an elaborate technique. The household arts division here embraces mainly the group of callings that centre around the home, and is intended to exclude those processes which, like weaving, spinning, clothing-making, fruit-preserving, baking, and the like, have become separated from the home, and are to be classed as manufacturing occupations. The phrase "home-making," however, still implies the possibility of considerable attainment in applied art and science, when these are involved in the preparation of food, dressmaking, the care of children, and, in general, the management of a home. In the interest of logical completeness, a sixth division should be recognized, as in France, to embrace the callings, like those of the fisherman and the sailor, which have to do with the sea.

For further convenience, we may consider various stages, or degrees, in the educational preparations for the above groups of occupations, corresponding to the terminology now used in liberal education: We may call that vocational training, which is adapted to persons of average capacity under fifteen years of age, "elementary"; and that which takes youths regularly from fifteen to eighteen or nineteen, "secondary";

while that which presupposes an age more than eighteen, and corresponding attainments, may be called the "higher vocational training."

Professional education is commonly classed as higher education; that is, it receives students after the completion of a secondary and sometimes collegiate education; but it is also true that, under some circumstances, the character of the elementary, and especially of the secondary stages, is determined somewhat by the probable requirements of the profession subsequently to be studied.

We now have under school conditions higher agricultural education, and the beginnings of that of elementary and secondary grade, these terms being partly determined by the age of pupils concerned, and partly by the degree of intellectual advancement required before the vocational study may be taken up.

In the commercial callings, schools are found for the higher, but only rarely for the lower levels, notwithstanding the fact that the bulk of workers are found in the lower grades of these callings. Certain specialized phases of commercial education, like bookkeeping, typewriting, and stenography, have already been well developed under school conditions.

In the industrial group, the higher levels (if we may so classify the preparation for the engineering and technological occupations, which might also fairly be classed as professional) are already well supplied with schools. It is the aim of contemporary movements in the United States to supply more extended opportunities in the secondary field, where wage-earners may be reached.

In the household arts, there exist at the present time almost no genuine vocational schools, although there are widespread opportunities for some partial study and practice of these arts, as phases of liberal education.

Pedagogical Divisions of Vocational Education

Vocational education under school conditions presents a wide range of difficulties, many of which grow out of the peculiar pedagogy of the subject. It is well known that in vocational education, as carried on in the home and the shop, the strong feature is still to be found on the practical side; that is, most of what the student learns, he learns by actual participation. The weak side of this vocational training is its absence of theory, its inability to give the student a comprehension of the laws and principles involved. On the other hand, the school is peculiarly strong

in its ability to impart the theory or abstract phases of the vocation, but is only partially adapted under existing conditions to give concrete participation.

In the study and practice which contribute to vocational efficiency, we may distinguish three aspects, each involving distinct pedagogical characteristics and special problems of administration. To train the horticulturist, for example, it is necessary to give him a variety of practical experiences in working with soil and plants and with the problems of marketing. In addition, he may, and should, study those phases of botany, physics, chemistry, entomology, bacteriology, meteorology, economics, etc., which contribute useful technical information and principles. A further field of possible study is found in the history of horticulture and the practice of that craft in other parts of the world, the evolution of plant life, etc. The first group of studies and practices may be called the concrete, specific, or practical; the second group, the technical; and the third, the general vocational studies.

In the preparation of the machinist, practical work will be suggested in connection with the use of the lathe, the forge, the drill press, and other tools regularly employed in that calling.

The technical studies will be found in drawing, shop-mathematics, the principles of mechanics, etc. The general vocational studies may consist of readings in the history of metal-working, the evolution of modern industry and the place of iron and steel therein; in the potentialities of trade-unionism, industrial coöperation, and the like.

For the youth who is preparing to work in a commercial calling, practical studies are to be found in the actual work of bookkeeping, typewriting, business practice, and salesmanship. Technical studies may be derived from these; also German, higher mathematics, commercial law, etc., may be pursued as technical studies. General vocational studies may be found in the history of commerce, geography (which for some callings would be a technical study), readings about industry in other fields, and the evolution of transportation and exchange.

In the study of home-making, the girl would, in the actual performance of household tasks such as needle-work, cooking, cleaning, nursing, and the like, find the concrete basis in experience for complete vocational study. Related technical studies will be found in those phases, however simplified, of chemistry, physics, bac-

teriology, economics, architecture, and exchange, which contribute to the larger vocational efficiency. As general vocational studies, a variety of readings in the historic aspects of the household, the achievements of modern sanitation, the work of charity and philanthropy, and protective legislation suggest themselves.

In existing schools where a complete vocational education is carried on, these three aspects are already found. In the training of teachers, for example, the practical work is found in the practice school, and other forms of apprenticeship. Technical studies are usually found in the fields of applied psychology, method, and special studies in subject matter. The history of education, sociology, educational practices in foreign countries, and the writings and biographies of educational reformers constitute the general vocational studies. In the training of the physician, the dissecting-room, the clinic, and hospital practice provide the concrete elements. Anatomy, materia medica, chemistry, and other studies supply the need for technical information and principles; in addition, the history of medicine, medical sociology, and medical jurisprudence, as well as biology and psychology, may be regarded as general vocational studies.

From this analysis, certain conclusions may be drawn. In the first place, as regards the general vocational studies, it will be apparent that these involve methods and administration not unlike those found in the field of liberal education; they are based largely on books, and have as their aim, the stimulation of ideals and vocational interests, rather than the acquisition of useful information. From some points of view, these general vocational studies may be regarded as the luxuries of vocational education, although there can be no doubt that they have a direct usefulness because they stimulate the interests which tend to make a vocation attractive, and which undoubtedly broaden and prolong the productive life of the worker.

In the second place, it may be noted that the technical studies as described, however they may vary for different vocations, may also be pursued largely under school conditions. To a large extent, these technical studies consist of art, mathematics, and science, in their various applications. It will be noted, however, that in vocational preparation, not so much of pure science and its fundamental principles, as applications, are implied. Bacteriology, for example, as a general science, may be pursued by but few people,

but there are certain applications of bacteriology which every nurse, housekeeper, and farmer may, and should, learn. Meteorology is a difficult science, but from meteorology may be taken certain specific situations which may, and should, be taught to every farmer. The same principle applies in the case of mathematics, although its application is yet obscured by the traditions of teaching in this field. For vocational purposes, the mathematics needed by the machinist differs widely from that needed by the farmer; how far the bookkeeper may need algebra in any way may be questioned; and on the other hand, the housekeeper needs a form of applied mathematics essentially different from all of the foregoing.

In the third place, the concrete or practical work as outlined above involves a pedagogy and administration fundamentally different from that found in most existing schools. It is at this point that the traditional forms of education practically break down; and it is in this respect that the problem of vocational education, especially in connection with the training of youths between the ages of fourteen and eighteen, presents its greatest difficulties. Modern experience, as well as theory, tends to demonstrate that vocational education which ignores or slights this

phase of practical training is largely futile. Furthermore, the same experience seems to indicate that the concrete and practical must not follow at a considerable distance technical and general vocational studies, but rather accompany, and in many cases, precede the same.

The Order and Relation of the Pedagogic Stages in Vocational Education

We have seen that, historically, the institutions which in the past gave vocational education were especially strong in the practical or concrete aspect of their subject, and weak in the more abstract phases. The home, farm, and shop have always provided an abundance of practical tasks and examples whereby to teach boys and girls the simple vocational arts. Under the apprenticeship system, as fostered by guilds and governments in the past, the courses in practical work were especially complete as respects length, comprehensiveness, and thoroughness.

On the other hand, the school has often been well equipped to give readily many of the theoretic or more bookish phases of vocational preparation. Many types of complete vocational education have involved the coöperation of the two kinds of agencies. Evening schools, for

example, have often taken mechanics who are already employed, and have given them something of the drawing, mathematics, and science, which they might need to supplement the practical learning of their craft. Correspondence schools have flourished owing to their ability to give to the employed worker just the facts in drawing, science, and other theoretical studies which he might need. To a large extent, the continuation work in the German schools is of this order. It takes various groups of boys and girls, who are employed in the trades, and gives to them the needed supplemental education.

In England, a considerable range of what are termed engineering or higher mechanical occupations involve the requirement that stages of study shall be alternated with periods — sometimes as much as a year in length — of actual apprenticeship in the industry itself. So widespread have been developments of this sort, that it not infrequently happens that educators and others think of vocational education solely in terms of the general and technical studies involved. This notion has received added emphasis from the fact that the higher reaches of all vocations require relatively so much theoretical preparation as to make it appear that

the theoretical study is the essential and vital part.

It is becoming apparent, however, that a more satisfactory theory of the pedagogy of vocational education must be developed. So far as the rank and file of students is concerned, it is increasingly evident that the more abstract studies, when not intimately related with concrete practice, fail to work out into the results expected.

The abstract studies are necessary, but they must accompany, or be preceded by, a considerable amount of actual participation in productive work, to the end that genuine vocational efficiency may result. It is even apparent that those modified forms of participation, such as are often found in business schools, manual training schools and classes, agricultural schools, and household arts schools, are of little service in vocational education because of their remoteness from the conditions of genuine productive work. These courses and studies will undoubtedly be found to have value, when they are arranged to follow, rather than to precede, a considerable amount of actual participation: *e. g.*, it is not impracticable that, for a young apprentice who is working under shop conditions, a certain amount of work devoted to special exercises for the attainment of

particular types of efficiency might well be worth while. For the farmer's boy, who brings to the agricultural school a considerable body of experience acquired under conditions of reality, the exemplification of modern processes as school exercises may have decided value.

It is, furthermore, becoming more and more evident that the technical studies, such as mathematics, drawing, physical science, biological science, art, and the rest, have a genuine functional value in vocational education only when they are closely integrated with the educational results acquired through participation in the productive processes themselves. It is probably psychologically true that, for the average person, the study of these applied arts and sciences, quite apart from and anterior to any participation in the productive processes, is futile and unproductive so far as vocational efficiency is concerned. Nothing can be more certain, however, than that the study of these same subjects, in close interrelation with the productive processes, tends to expand rapidly the capacity of the worker. We may then base on these considerations a tentative theory of vocational education.

When the time arrives in the development of the boy or girl that he should seriously under-

take preparation for a calling, it is necessary that somehow and somewhere he should be able to devote a considerable time to actual participation in the concrete processes of the calling itself. He should get very near to reality, not only as regards the external characteristics of the work produced, but also as regards its market value, its rate of production, and the social circumstances attendant upon its production. Having thus come intimately into contact with reality, he should have time set apart in which to study the more theoretical aspects of the calling. Here again, however, a sound theory would seem to require that mathematics, science, art, history, and other related subjects should not require such an order of presentation as to detach them from the experience of the young worker. This has undoubtedly been the vice of a great deal of the technical study carried on in schools for the purpose of supplemental education. Between the experience of the worker and the studies in the schools, there have been too few points of contact to serve to create true pedagogical efficiency.

From this point of view, for example, in the making of the true agriculturist of middle rank, we should expect the boy to participate for a part of each day, or week, or month, or year, in the

actual productive work of the home or school farm. We should expect him to study, not general botany, but that botany which is naturally suggested by the conditions under which he works; his study of fertilizers, from the chemical and economic point of view, should begin with the fertilizers which he uses and the conditions under which, in attaining practical results, he uses them; his study of bookkeeping should grow out of the income and expenditure conditions under which the work in which he participates is carried on; his study of physics should rest on the foundation of his actual experience.

Similarly, in the making of the mechanic, we should expect the boy to go to work either in a school, a shop, or a factory, where he could begin at the simpler stages of productive work, and where, from day to day, his work should be squared up with the conditions of actual production. This phase of his training should be such as to require shop clothing, shop hours, shop associations, the standards of shop production, and some knowledge, and perhaps some sharing, of the actual value of his output. Under the phases of this experience can be collected related studies in drawing, applied science, art, bookkeeping, economics, the ethics of trade-unionism, and all

the other studies which have a greater or less vocational significance.

In the preparation of the girl for the specific work of home-making, a variety of opportunities for concrete participation suggest themselves. Already in this field, we have a considerable variety of technical studies; but, in so far as these are ineffective at present, their weakness is due to the lack of correlation between them and the home experience on which they are presumed to build.

The commercial callings now present, for certain occupations, well-worked-out school conditions of participation, especially in typewriting and certain forms of bookkeeping. On the other hand, it is evident that we have yet by no means solved the problems of providing the right kind of experiential basis for a considerable range of the clerical occupations.

It must be at once admitted that, for a great variety of vocations, we can yet hardly see how, under school conditions, the concrete basis of participation in productive work can be found.

Coöperation of Agencies in Vocational Education

The foregoing analysis suggests that in many fields, the most effective vocational education might be achieved by the systematic coöperation

of agencies. We already have, in the United States, for example, schools in which the boys give a part of the time — a half of each day, or alternate weeks — to shop-work in actual shops, and the remaining time to schools, whose theoretic work is intimately connected with that of the shops. Where great manufacturing, transportation, or commercial agencies have developed private schools of their own, these schools have almost invariably been evolved so as to take the boys and girls who are already giving a considerable amount of time to the study and practice of the more practical aspects of the calling.

It has already been shown that in England, the study of engineering callings requires part-time participation in productive industry. In some countries, in the marine callings, before the student may enter on theoretical study, he must have had a considerable time as an apprentice in practice.

In a large range of German intermediate technical schools, one of the requirements for admission is that the student shall have served one, two, or three years as a worker, and, as such, must have demonstrated his capacity for the further theoretic studies. Where correspondence work is successful, it is so mainly because it ap-

plies to a limited number of workers who have already achieved success along practical lines, and who, on the basis of that practical experience, are able to acquire technical power. In some of the best work in household arts in England, the school and the home, or the school and the employer, now coöperate so intimately that the net effect is an integral vocational education. Some of the best continuation work in the United States practically accomplishes its results in the same way.

It is, of course, not yet apparent how far this coöperative management is possible in various types of industry. The individualism of the American employer and the lack of paternalistic attitude in the Government may make it impossible to achieve this form of coöperation, even if it were not open to objections on the grounds of its practicability. If that should prove to be the case, it will undoubtedly be necessary, in the interests of complete vocational education, to develop facilities for the acquisition of practical experience in the schools themselves, and herein lies the greatest administrative difficulty to be encountered by these schools. To achieve this end, they must abandon a variety of traditions which are dear to schoolmasters and school administrators. The

proposed school must have the aspect of a shop rather than a school. In the length of day, shop surroundings, the disposal of product, the training of teachers, and the maintenance of discipline, shop standards rather than school standards will have to prevail. So radical a departure will this be that many of the ablest students of the situation are convinced that a separate system of administration from that of the schools of liberal learning may prove to be necessary, temporarily, at least.

For a long time, we may expect so-called vocational education to tend to be theoretic and bookish, unless we frankly accept the notion that the study of theory must rest on and intimately blend with conditions which are eminently practical. It will be seen that no one can yet prophesy what will be the type of vocational arrangement for any given industry. It may prove highly practicable to bring private agencies into coöperation with the schools; on the other hand, it may prove indispensable that the vocational school shall reproduce all the conditions, practical and theoretical, necessary for the giving of complete vocational efficiency. We are still dealing with only the beginnings of these problems.

The Relation of Vocational Education to Manual Training

In modern educational doctrine, manual training occupies an intermediate field between vocational and liberal education. In the minds of many, who were originally influential in introducing drawing, manual training, household arts, and mechanical arts, these studies were designed to contribute to vocational efficiency. By schoolmasters and educational administrators, their contributions to liberal education have been constantly exalted, and these subjects have been largely divested of vocational significance. It is undeniable that manual training, rightly conducted, is an important modern contribution to liberal education, and especially in proportion as the limitations of the home deprive the child of opportunity for experience in the field of constructive and manual activities.

Few will doubt that a wide range of contact with tools and the materials to which tools are applied, as found in the hand-work, bench-work, gardening, cooking, and in the machine-shop work of the modern schools, is exceedingly desirable. It is a fact, however, that the manual training so given is rarely controlled by the motive of voca-

tional training, and that it rarely results in any recognizable form of vocational efficiency. In its contributions to vocational education, it is more nearly comparable with the development which results from play and other forms of spontaneous experience-getting.

The mechanic arts and technical high schools, which were originally expected to train the higher ranks of factory- and trade-workers, have generally failed to achieve this end. These magnificent schools have been sought in increasing numbers by youths so situated as to be capable of an extended liberal education. They have offered kinds of liberal education which function more vitally, in many cases, than do the classical studies offered by other schools. Manual training, however, has seldom been more than an incident in such general education. Only a few hours of work a week, at best, have been allotted to it. The spirit of approach has been that of the amateur, or dilettante, rather than of the person interested in attaining vocational fitness. Only slowly has the work been removed from the field of amateurish effort. Much of the original manual training was affected by the arts-and-crafts movement, which is fundamentally important to the consumer of products rather than

to the producer. Much of the household work was impracticable, when considered from the standpoint of household necessities. Throughout, it has been dominated by the ideals of liberal education rather than of vocation, and as such, it has in spite of a certain artificial character and a considerable disregard of pedagogic principles, made important contributions. It can hardly be doubted that a place of increasing importance is still reserved for manual training, as part of a liberal education. It will be remembered that liberal education functions in the avocational, as contrasted with the vocational side of life. For the prospective lawyer, gardening, cabinetwork, or pottery may be important and suggestive activities. A small amount of gardening would probably make all people more intelligent consumers. A vital form of constructive work in the manual training field will enhance the powers of all people to appreciate the material surroundings in which they must live.

For girls, a wide range of activities can be devised on the manual training basis which will make them more judicious consumers. Furthermore, a generous course in manual training actively followed provides a variety of suggestions for subsequent choice of a vocation. Through it,

many boys will discover a bent, or capacity, along which a vocational education may be carried out.

All this assumes that manual training, like the other factors in a liberal education, will be made progressively more vital; will divest itself of formal and pedantic elements; will cease to rely upon a discredited psychology; and will take advantage of fundamental instincts and interests in those to whom it applies. Manual training will be taken, not in the spirit of the vocational worker, but in that of the liberal student, thinking of and comprehending the world in which he lives. It will preserve many of the elements of a high-grade play or avocation. If we assume that little distinctively vocational education will be found in the elementary schools, we may also assume that many pupils will be allowed even greater opportunities than are now available for the development of their capacities in the field of the industrial arts, studied mainly from the point of view of gaining variety and range of experience, and a basis for the subsequent selection of vocational activities.

During the high school period, it is highly probable that an increasing number of boys and girls will find in enriched manual training a

means of liberal education, such as now the traditional studies can hardly be said to contribute. This enriched manual training will be more and more correlated with mathematics, science, art, history, and economics in such a way as to cause these to function more certainly as elements in a liberal education.

Here again, as in the last section, it must be asserted that manual training and vocational education should be controlled by different purposes to a considerable degree, though each contributes measurably to the purposes of the other. If manual training is designed to give the breadth of experience, to evoke the interests, and to stimulate the forms of appreciation desired, then it cannot be identified with the intensive and purposive character of vocational education. Vocational education must be carried on, as far as possible, under the conditions of a workshop. Manual training, as a part of liberal education, must not divorce itself from contemporary life; but, on the other hand, it must be approached from the standpoint of the breadth and interest inherent in the true instrumentalities of liberal education.

Problems of Intermediate or Introductory Vocational Education

While for many types of vocational education it will be possible to assume the completion of a high school course, it will probably remain true for a long time that large numbers of children, owing to predisposition, or the economic situation in which they find themselves, will desire to make beginnings of vocational training shortly after passing the age of fourteen; on the other hand, in many industries and commercial fields, children are not desired under the age of sixteen. It has been pointed out in the report of the Douglas Commission (of Massachusetts), as well as elsewhere, that the period from fourteen to sixteen is a critical one in the vocational development of large numbers of children. This is the period when economic necessity or ambition tempts children into callings which are temporarily quite remunerative (in a relative sense for these children), but which are essentially non-educative. The development of factory production and business on a large scale has opened a great many avenues of this sort, which are tempting to youth, but the outcome of which is the unskilled worker. Intermediate vocational education

adapted to children from fourteen to sixteen, which should be practical and productive, and at the same time, lead towards profitable occupations, is highly desirable, but its development at the present time is beset with difficulties and uncertainties. We know, for example, that in the industries, specialization is the rule, but during this introductory period, it would seem undesirable for pupils to specialize much in their work; rather, from the theoretical standpoint, this introductory preparation should be broad, and, as far as possible, lead to fundamental forms of skill and comprehension of large principles. To reconcile this demand with the other requirement previously mentioned, that the work should be productive and in accord with prevailing industrial tendencies, is difficult. A typical example may be found in the shoe-manufacturing industry. This industry is now subdivided into nearly one hundred distinct branches, each one of which possesses some of the characteristics of a trade. Assuming that the specialized workers in this field usually begin at sixteen or seventeen, it is questionable if, at the age of fourteen, in commencing industrial preparation for this work, the young worker should be specialized; on the other hand, how may the beginner engage in pro-

ductive work in this field which has a marketable significance?

There is also the very great administrative difficulty of providing, under public school conditions, for a wide range of industries with their expensive equipment. The probabilities are that in time we shall discover a relatively small number of groups of industries, in each one of which a sufficient scope and variety of projects can be evolved around which the future worker can perform practicable and profitable operations, while, at the same time, getting a fundamental vocational training. We know that such groups of related industries exist. In the United States, for example, over a million workers are found in the wood-working callings. Many of these are extremely specialized but, at bottom, they rest on a few tool-forms — hand and power — and on certain general knowledge and experience with materials. It seems highly probable that boys of fourteen, when beginning their vocational training, can be set to work on projects involving wood and wood-working tools in such a way as to produce a marketable product and that, by gradual intensification and specialization of effort, they can be made ready by the age of sixteen for more specific trade instruction in building, cab-

inetmaking, etc. A similarly large group of workers employ iron and steel, and the tools related thereto, as basal elements. Other great groups are found in the factory production of textile goods; in the manufacture of textile goods into clothing; in the minor metal industries (ranging from jewelry to tinsmithing); in the industries employing clay and furnace heat (glass, pottery, etc.); in the semi-mechanical industries, involving the control of steam and other power-supplying agencies; in the food-packing industries (including fruit, vegetables and meat); and several other divisions.

It is also quite possible that a combination of public and private effort, in the form of coöperation discussed above, would enable the prospective worker at the age of fourteen to get, in the factory, by passing from one specialized product to another for two or three years, a fundamental form of training and a wide range of experience, which would make the most satisfactory foundation for subsequent specialization. This discussion, of course, applies merely to the difficulties of giving the concrete or practical side of vocational training; the theoretical, or more abstract forms, are relatively easy of achievement.

The Problem of Women in Industry

Any discussion of contemporary industry must take account of the fact that, under modern economic conditions, women are to an increasing extent drawn away from the home and into other productive callings. It has been pointed out by some clear-sighted writers that, to a large extent, women have simply followed the industries away from the home, as these have been organized more and more under factory conditions. It is well known, of course, that textile manufacture, garment-making, food-preserving, and industries like baking and brewing have been detached from the home, leaving it relatively poorer in industrial opportunity. From the social point of view, it must be expected that all women, as well as men, will somehow and somewhere be producers, it being assumed, of course, that home-making is one of the productive callings.

It is, therefore, not unnatural that women should be found in increasing numbers in the industries, but a peculiar problem arises in connection with their education therefor. The fact is, that while enormous numbers of girls and young women may be expected to take up wage-earning careers, it must also be expected, in normal so-

ciety, that large numbers of these will become home-makers after a few years in wage-earning callings. Among factory populations, it is a well-known fact to-day that the great majority of girls begin as wage-earners at from fourteen to sixteen years of age; that they continue as such for from five to eight years, after which they marry and, if conditions are at all prosperous, they devote themselves henceforth to home-making. Only under economic conditions of severe stress is it necessary that a woman, who must care for children, is obliged also to supplement that responsibility with work outside the home; and this is a condition which it must be the aim of social effort to disapprove, and reduce where possible, in the interests of the well-being of the home and its children.

We now see, therefore, the twofold character of the education which must be designed for large numbers of women: they must be prepared, as it were, for two careers, the first of which will continue for a few years only; the other of which must be prolonged and for which a proper education is highly desirable. Under primitive conditions, the wage-earning career of the girl was usually spent in some home where she continued to learn the arts that would subsequently be of

service in her own home. Under modern wage-earning conditions, it can hardly be said that the girl who becomes a worker in the factory, department-store, or the clothing-making establishment, is getting therefrom even a small part of the equipment that will help her in home-making; as a matter of practical experience, it is known that during this period she may be positively unfitted as regards the thrift and practical qualities required in the home-maker. Already a few vocational schools for girls have been established, having reference to the wage-earning callings. As a part of liberal education, increasing attention is given in all types of schools to preparation for household occupations. For the girl so situated as to be able to take considerable part of a general secondary education, the opportunities for training for the household seem somewhat promising, but, for that large number who desire, or who are obliged to begin wage-earning shortly after fourteen years of age, the opportunities for satisfactory home-training seem to be very limited. It has been suggested that this problem will, to some extent, be solved by accepting what seems to be a present tendency of the industries to put the girls into highly specialized occupations, requiring little or no educational

preparation; and to provide these same persons, by extension classes and otherwise, during the wage-earning period, with some training for home-making. To an increasing extent, it seems probable that the protection of the law will be thrown around the working girl, as regards hours of labor, physical conditions, and, it may be expected, opportunities for necessary continuation education. It certainly seems impracticable to deprive girls from fourteen to twenty of the opportunities for wage-earning; on the other hand, it is certainly undesirable that, during this period, there should be no preparation for home-making interests. Society will undoubtedly require that the two functions become harmonized, to the end that the welfare of the individual and the soundness of society may at the same time be conserved.

Problems of Agricultural Education

Great interest attaches at the present time to agricultural training, as a phase of vocational education. America is peculiarly adapted to the agricultural pursuits, and it is increasingly evident that it is socially wholesome for the State to have a considerable number of its members in this field of productive work. It has been previously pointed out that education for the agricultural

callings is no less necessary than for the trades, and that the increasing application of science makes greater demands on the technical side of this training. The administrative problems of agricultural education are, however, somewhat peculiar. In manufacturing areas and cities, where the population is dense, the specialized industrial school is feasible; in rural areas, if the youth are to remain at home, it becomes an administrative problem of great difficulty to provide the special facilities for agricultural education.

The American rural community has not only developed a system of elementary education, but has, almost everywhere, in recent years, provided the opportunities for secondary education in the liberal arts. Now that agricultural education is also demanded, the question arises as to whether it can be integrated with the existing liberal arts schools, rather than organized on a separate basis. It will later be shown that for many types of vocational education, a certain amount of separation in administration from the ordinary school system is necessary, in order to insure a successful development. In the case of agriculture, however, it must be remembered that the boys and girls come usually from farm homes, where

a certain amount of home vocational training, or, at least, the opportunities for it, still exist. Some careful students of the subject insist that if, in an ordinary high school, a department of agricultural training under competent direction be organized, and if the work be so conducted as to take advantage of the concrete experience obtained in the home and on the farm, excellent results of a vocational kind will follow. On the other hand, it is feared by many of those genuinely interested in agricultural education, that the liberal-arts atmosphere of the high school will tend to make of the agricultural education an unsubstantial article, formed largely in imitation of the other studies; that, in spite of good intentions, it will tend to become bookish and unreal; that the older theory of correlating cultural and vocational education will be the undoing of the latter. From this point of view, general agricultural education can be carried on only in the separate institution which is more farm than school, and in which the conditions of practical participation in productive work form the controlling element in the total programme. Both forms of organization are at present having experimental development, and it is quite possible that within a few years, we shall know, on the basis

of practical results, what is desirable. It is not impossible that a place will be found for each form of organization. The high school, with an agricultural department, may prove to form an excellent institution for almost any rural community, where coöperation with home activities is practicable; and on the other hand, this type may be supplemented, for somewhat older children, by a centralized institution, whose opportunities for vocational training will be more concentrated and effective, and which shall, by short courses and special opportunities, give the kind of training which is impossible to the first.

Problems of Administration

The administration of American education is commonly democratic and local, by which is meant that ultimate control lies in the hands of representatives of the people, and the units of administration are small rather than State-wide. From what has already been said, it is evident that vocational schools, under public support, will present many points of difference, if not of contrast, to schools now in existence, which were founded to perpetuate and develop the traditions of liberal education. Such schools must approximate shop conditions in their arrangements; their hours per

day, and days per week, must gradually approach those of productive industry, rather than those of ordinary schools; the clothing must be that adapted to practical work; and the teachers must be, primarily, efficient workmen and, secondarily, trained in the art of teaching and controlling young people.

It may well be questioned how far education of this sort may require special administrative machinery for its conduct, direction and inspection, both as respects lay boards, on the one hand, and its expert managers and teachers on the other. It is feared, and not unjustly, that boards of education accustomed to the traditions of liberal education may allow the vocational training to become bookish and impractical. Men engaged in productive industry and who, therefore, comprehend some of the limitations and necessities of the training required for practical efficiency, may well be excused for their present distrust of superintendents of schools and principals as administrators of these vocational types of education. In time, it will undoubtedly prove true that men of capacity as school administrators will come fully to understand the philosophy of vocational education, after which they will become competent as directors of the same. In the mean time,

it is a practical and pertinent question, how far vocational education should be separated from liberal, in administration.

It is generally agreed that the vocational school should develop amid its own surroundings, in order that it may preserve its contact with productive industry. Furthermore, it is generally agreed that a vocational school or system of schools should have, either as a board of control, or as a board in an advisory capacity, a body of persons who, as employers, employees and independent workers, should have a close contact with productive industry of the type concerned. It may be found administratively feasible to allow the existing boards of education, and the boards which provide support, to oversee, in a general way, the vocational schools, provided opportunities can be developed whereby the advisory committees can stand in some effective relation to the admission of students, the selection of teachers, and the determination of the practical pedagogy of the school. A somewhat similar question arises with regard to the expert direction. Should the manager of a vocational school who must be, primarily, an administrator in sympathy with vocational education, be under the same general direction as are the heads of other schools? In some places,

a superintendent of schools can be found, who has correct perspective and insight regarding vocational education; in other places, the superintendent is dominated by academic traditions, and finds it practically impossible to enter into sympathetic connections with the aims and methods of vocational schools.

The question of inspection, or State supervision, presents like difficulties. From the standpoint of general administration, it is highly desirable that all general educational forces should be unified in one State body, acting through a single general agent; on the other hand, this again may fail to guarantee the sympathetic and practical oversight which is necessary for the evolution of a true vocational education. The difficulty may be solved by the creation of supplemental advisory boards, and by the employment, under the State Board, of one or more experts to direct vocational education as specialists, who shall act in a coördinate capacity with other experts.

The probabilities are that the American States will refuse to erect a complete, independent machinery for the conduct of vocational education; that, on the other hand, in all States, there will be attempts to introduce, in professional and ad-

visory capacities, experts and bodies of laymen who may be expected to preserve a sympathetic attitude towards these newer types of schools, and to promote the ends for which they exist. To entrust vocational schools entirely to those familiar with the administration of liberal education only, will undoubtedly often prove unwise; on the other hand, to endow both expert and lay bodies with definite responsibilities, and to require that they coöperate effectively with industrial and other agencies having a special contact with and interest in vocational schools, will tend undoubtedly to give the maximum of efficiency.

Miscellaneous Problems

Several other special problems will appear in connection with the organization and conduct of vocational education: —

(*a*) It has been already pointed out that the practical work of the vocational school should conform approximately to the prevailing conditions of industry. This also involves the idea that the output should have a market value, and that it should be disposed of, partly to the profit of the school, and partly to the profit of the individual worker. It should be quite clear that the motive of the student can be greatly

stimulated by this procedure, and that it is socially uneconomical to have students in this work confine their efforts to unproductive exercises. But the disposal of product presents many difficulties. A part of it can doubtless be absorbed into the public utilities of the community, as, for example, in wood-working shops, where bookcases and other forms of furniture can be made for use in local public schools. In some schools, repair work comes into this category. Agricultural schools, with boarding facilities, supply a considerable amount of the food stuffs and tools necessary to their work. On the whole, however, these methods of disposal will doubtless prove inadequate. It will be necessary that the product of the school find its way to market, in competition with the output of the industries. This form of disposition will require exceedingly careful management, in order that the advantages of the school may not be used to the detriment of producers outside. In any event, it would seem that the total output of such schools must be so small as to present but a small element of danger in this connection, provided the marketing is so carried on as not to disturb prevailing market rates.

(*b*) Vocational education will have to be varied

in kind, according to the variety of callings for which preparation is given. It would also appear that it must be varied in degree and aim, in order to adapt it to the varied capacities and economic needs of those who seek it. This means that preconceived notions as to length of courses and organization of work must give way to the necessities disclosed by experience. It must be recognized that it will be desirable to maintain short courses for workers already in the industries, and these may partake of a highly specialized character. Young men who have been farming for some years may desire six-weeks or three-months courses in the technical aspects of poultry-raising, bee-keeping, and the like. Such short and intensive technical courses are already occasionally found, and are exceedingly valuable. Again, it may happen that a man already employed in a manufacturing industry may desire a short and intensive course in the use of some particular tool or process. These short courses may either take the part-time form, or may involve the worker's taking a furlough from his employment. Private efforts, like those of the Young Men's Christian Association, already give many suggestions as to the feasibility of these short courses. It will be evident that, as vocational education develops

and schools become equipped, a constantly increasing range of opportunities will present themselves for useful service.

(*c*) In view of the fact that the technical studies, in a satisfactory form of vocational education, must be closely related to the practical, it is evident that we still lack, to a large extent, the text-books and other guides necessary to this end. In fact, it may prove necessary that in each school, to a considerable extent, special syllabi, or text-books, be worked out, adapted to the local conditions. It will be apparent to any observer that the correspondence-schools, business-schools, and similar organizations have already worked out a variety of appliances of this kind. It may be expected that when within these schools the teachers have fully grasped the pedagogy involved, a large variety of syllabi and other helps will appear which will assist any teacher in finding problems and studies adapted to his local situation.

(*d*) It has been noted above that care must be exercised in developing vocational education that market conditions be not disturbed. It will also be evident that such schools present problems in connection with the labor market as well. In certain industries, the organization of labor

has succeeded in producing certain standards of compensation, the further maintenance of which appears to be dependent on a limitation in the supply of workers offering themselves. Specific situations will doubtless arise in which vocational schools may operate, if improperly managed, to break down prevailing rates of compensation. Here again, however, the larger social need must control, and the administrators of such schools must so organize their efforts as not to inflict undue hardship on existing employment. The controlling social need must be the supply of opportunities for vocational education to as many boys and girls as possible, in the conviction that the presence in society of a very large number of well-trained workers will redound to the benefit of all society. Subject to this controlling principle, special adjustment must be made, wherever possible, to prevent hardship.

The Support of Vocational Education

Experience already demonstrates that vocational education will prove to be expensive. Where part-time schemes do not succeed, the equipment of independent schools will prove costly. Under any circumstances, the teachers will be obliged to have a combination of practical

and theoretical training, which will make it necessary that they be paid more than skilled workers in the fields from which they come. These teachers, again, can handle effectively only relatively small groups of students, and it may be expected, therefore, that the annual per capita cost of genuinely vocational education will range from $75.00, at the lowest, to several hundred dollars, as a maximum. It may be anticipated, of course, that for large numbers of workers, a course less than four years in length will be sufficient. The expenditure for these lines must be looked at from the social point of view, and as a form of social investment. A given community may well expect to receive back far more than this outlay in the shape of the increased productive capacity of the workers turned out.

Owing to conditions promoting mobility in American labor, it has become customary for workmen to move easily from one community to another. If workmen stayed in the place of their birth and education, a given community could expect to find its wealth increasing proportionately, if it supported vocational schools, but there is no guarantee that the workman trained in one community will remain there; consequently, it becomes desirable and just that the larger ad-

ministrative units should contribute something to this form of education, since the benefits of it spread over the larger area. To this end, it is becoming recognized that the State, as a taxing unit, should contribute something — if not fully one-half— to the cost of maintenance of these vocational schools. In fact, it may be asserted that the National Government itself could legitimately be called upon to aid this form of education, since the general migratory tendency of laborers carries them constantly beyond State bounds. The National Government already contributes to vocational education of a higher, or semi-professional level, in the engineering or agricultural callings. From the administrative point of view, it is desirable and expedient that it should contribute to work still farther down the line.

Those who are interested in the expansion of vocational education must tend constantly to interpret it as a productive and justifiable form of social investment. It must be pointed out that already the American public expends upon a number of relatively unproductive lines of activity vastly greater sums than are expended for education. The actual cost of the liquor consumption of the American people is probably three or

four times as great as that of education. The outlay for tobacco is commonly supposed to be about equal to the cost of all forms of public instruction. Another field of expenditure, which can hardly be described as being as socially productive as education, is advertising; yet the total outlay on it is in excess of that for all forms of education.

Owing to imperfect systems of taxation, the burden of supporting either liberal or vocational education seems often to be an especially heavy one. The fault is to be found, not in the actual cost of such education, but in the imperfect distribution of its burdens. Communities must be made to realize that the total amount of social outlay for education is even now but an insignificant part of the total social expenditure; and that, on the other hand, that outlay is probably one of the most effective forms of expenditure yet devised. Constant insistence on these notions will, in the course of time, bring about reforms in taxing methods, devices for the reduction of wasteful expenditure, and a fuller appreciation of the value of expenditure for education, liberal and vocational.

The Teaching Force

It is by this time fully obvious that the problem of supplying teachers for vocational schools differs largely from similar problems in other departments of education. For many years, in Europe and America, attempts have been made to recruit the teaching force in vocational schools, from people trained along academic and pedagogic lines. In nearly all cases, this attempt has failed, mainly because such teachers lacked concrete and practical experience with industrial conditions. However well-intentioned, they were not able to keep themselves in touch with the actual requirements of productive industry. It is generally agreed to-day that a successful teacher in a vocational field must be primarily equipped as a practical workman. To this equipment of habit, skill, and knowledge, it is highly desirable that he should add as much pedagogic ability and general culture as possible. In the training of such teachers, therefore, it seems probable that for a long time society will have to endeavor to pick from the field of young workmen and others who have served a successful apprenticeship those who manifest some teaching ability, or ambition to enter this field. These may be given

a short course of training in theoretical pedagogy and, possibly, some beginnings in the practice of teaching. It is already obvious, of course, that there must be many types of vocational education and, consequently, there must be many sources of practical work from which teachers are to be drawn.

Whether it will prove practicable to assemble skilled young workers in a central institution for the purpose of giving them their pedagogic training is not now apparent. At first, it may prove feasible to have short courses or institutes in which practically trained men and women of some teaching aptitude can be gathered for the purpose of learning something of the art of teaching. The building up of a teaching force for the vocational schools ought not to prove an insurmountable problem when once the character of the field is recognized. These teaching positions may be made to pay somewhat better than the positions of skilled workmen along commercial, industrial, and agricultural lines. The permanency of the position and the agreeable character of the work should prove added attractions. It is improbable that we shall, for a long time, see training schools that will endeavor to comprehend the entire range of training for

this field, including the stages of apprenticeship; on the other hand, it may be expected, as vocational schools develop and succeed, that in the student body of each, there will appear young workmen with teaching capacity, and these may gradually be directed toward preparation for teaching as a career. At bottom, the question of supplying teachers is one of sufficient compensation; given a satisfactory financial basis, it will not prove at all impossible to find many intelligent young workmen who will gladly take up this work.

The Relation of Vocational to Cultural Education

Much confusion of thought exists as to the relation of vocational to cultural education. This is natural, in view of the attempts that have been made to carry on vocational education by the same administrative machinery, and along the same pedagogic lines as the well-established forms of liberal education, but it is necessary to recognize that the two forms are largely unlike as regards aims, administrative machinery, and pedagogic method to be employed. Both have something of a common basis in certain studies like reading, writing, number, and elementary drawing; even in the case of these stud-

ies, however, so far as the rank and file of workers are concerned, there relatively early appears the possibility of differentiation of aim according as the vocational or the cultural purpose is to control. Certain phases of liberal education, like history, civics, geography, science, and mathematics, may have contributed something of the knowledge and ideals which later come to be of vocational significance, but these must be looked upon as by-products, and, to a considerable extent, as accidental elements, from the point of view of strictly vocational training.

It was formerly supposed that any study, seriously pursued, resulted in a certain amount of mental training which could be employed in any field, related or unrelated to that study. Under the influence of this idea, it was believed that the study of higher mathematics or of foreign language resulted in a development of certain intellectual powers, and that these powers could be readily applied when vocational pursuits were undertaken. From the standpoint of modern psychology, this doctrine has been much discredited. It is probably true that liberal studies pursued with interest do result in some powers which may have vocational application; it is much more probable, however, that the vocational success,

which has so often attended those who have had the advantages of higher education, has been due rather to native ability which the institutions of higher education have been successful in selecting and putting into relief.

It is true that liberal education, as formerly carried on, did suggest means, or contribute to preparation, for certain callings more than to others. It is a common belief that persons with secondary or college education turn more naturally to the clerical, or commercial, than to the industrial callings. There is good ground for believing that many of the studies designated as liberal find their strongest justification in the elements which they contribute to professional training. From this point of view, it might justifiably be said that a liberal education is essential to certain kinds of vocational success, but a more correct interpretation would be that some of the so-called liberal studies are in reality vocational.

But any discussion of this subject must involve a clear recognition of the fact that liberal education primarily has to do with art, music, literature, foreign language, history, geography, natural science, and social science, from the standpoint of the individual as one who is to learn

to appreciate, on a broad scale, the world in which he lives. For most individuals, these studies have little or nothing to do with vocational efficiency, which is something to be attained by specialized endeavor, and along lines determined by its needs. All attempts to make the subjects of liberal education yield vocational efficiency are destined to fail, because to a large extent, such effort will result in depriving them of their true significance as factors in a liberal education. Even such subjects as mathematics, science, and drawing, when pursued in the general sense, may lend themselves only slightly to vocational application, especially in view of the modern tendency towards specialized production; on the other hand, these subjects may very well be pursued for vocational purposes, in which case the choice of material and method will be controlled mainly by the ends of vocational efficiency.

It is clear, however, that the aims of liberal education can be to some extent realized through the measures adopted for a generous vocational education. This result may be achieved in several ways. Vocational pursuits, by drawing upon the instincts of construction and upon creative tendencies, may develop thinking interests and mo-

tives in related studies. In practical life, we often find this in the active interest which is developed in the study of physics by one who has become vocationally interested in mechanics, electricity, or steam. At the present time, many women find their most active motive for the study of chemistry in the necessities suggested by investigation and practice of the home-keeping arts. It is well known that youths and men who have made some beginnings in scientific agriculture, pursue a wide range of studies and reading in their endeavor to grasp the principles underlying that subject. Not a few teachers who have become devoted to their work find in their professional interests sufficient motives for extensive studies into the evolution of educational practices. Girls who are studying dressmaking become interested in the possibilities of color combinations. Economic history becomes especially significant to the person who has had some contact with the commerce of the present time. These and many more possible examples suggest that the beginnings in vocational study may inspire interests and motives which carry the student far over into the field of liberal education, with a degree of vital appreciation, which could be procured in no other way.

Again, it frequently happens that a child has lost all interest in the more abstract studies of the school, and, for him, participation in active constructive work may be the means of inspiring intellectual activity which, in turn, becomes distinctly an aspect of liberal education. Examples of this are familiar to all teachers who have had to do with vocational education in trade schools, reform schools, and business colleges.

In still another direction, vocational education may contribute largely to the aims of liberal education. It has been previously indicated that one large factor in liberal education is the socialization of the individual; that is, bringing him into sympathetic and perceiving relations with the rest of the social life about him. Civic education has this as its chief aim, but to a large extent morality and civic efficiency rest on economic foundations, and for many persons, economic activities are the best approach to the insight here suggested. In connection with productive work, the virtues of thrift, honest effort, coöperation, and the like, can be more successfully imparted. It is not improbable that, for a great many boys and girls, particularly those not endowed with the higher idealism, this, under the right teaching, may be made the most effective approach

to an efficient and vital education in civic responsibility.

Liberal and vocational education are not identical, and have only certain elements in common; they aim in essentially different directions, and their valid aims can be realized only by making allowance for this difference. On the other hand, some of the studies which contribute to liberal education may be so handled as to give a basis, or approach, or means of choice to subsequent vocational education. For many persons, a vital vocational education, resting on concrete foundations and making due allowance for expansion into the related fields of science, art, history, economics, and civics, may become an exceedingly effective means of liberalizing the minds of several types of boys and girls, and especially those least capable of abstract thinking or social idealism.

The Types of Schools

The question is frequently raised as to the distinctions among various types of schools as now found. It must be acknowledged that in this field great confusion of terminology still prevails. Among the terms now in use are these: manual training school, household arts school,

technical high school, mechanic arts high school, industrial high school, manual training high school, industrial school, trade school, intermediate industrial school, etc. It will be evident that the confusion of terminology with regard to these schools rests upon a more fundamental confusion as to processes, methods, and aims.

Manual training, as has been shown, is essentially part of the scheme of liberal education, in spite of the designs of some who were instrumental in introducing it. It has suffered peculiarly from the psychological fallacy of formal discipline. It was long ago seen that the practice of many crafts involved, or required, extensive motor (mainly hand) training. Therefore, said the naïve theorist of the past, let us train the hand. But there are scores of kinds of hand-training, and the attainment of one kind of dexterity does not guarantee another, else would baseball and bicycle-riding be most useful forms of manual training. To-day we still call a variety of concrete work in the grades "manual training," but in some quarters, the term "industrial training," or "industrial arts," is used by preference.

Under the head of industrial arts should be included those studies which, employing manual and constructive, or other methods, are aimed

primarily to give appreciation, taste, and insight, but without being designed to secure proficiency in vocation. A corresponding range of liberal studies would be the household arts, and another, the agricultural arts. It is not impossible, indeed, that a group of commercial studies, as elements in liberal education, could be differentiated in the same way.

It was previously noted that the manual training, technical, or mechanic arts high schools originally had an implicit vocational purpose, which has largely failed of realization. With but few exceptions, these schools are essentially controlled at the present time by the aims of liberal education ; in some cases, more of manual training is given, and it is not impossible that in time some of these schools may develop into true vocational schools. In few instances, they aim to secure a considerable degree of proficiency in the technical, as opposed to the practical studies attending certain vocations; for example, they give the training in mathematics, mechanics, and drawing, which might, when coupled with practical proficiency, produce a high-grade mechanic. Owing, however, to their inversion of the pedagogic order of approach to these studies, which is deemed essential to vocational efficiency, it is

a question whether they can ever be called, in the true sense, vocational schools. As far as they are vocational, they are so only for a group of occupations which, like architecture and engineering, still involve largely the capacity for abstract thinking and organization.

Trade schools, in large variety, already exist in the United States, usually under philanthropic or private direction. Commonly, these have well-defined, practical aims, and, owing to their circumstances, their work commonly functions as designed. In a considerable number of instances, trade schools, like the apprenticeship system which they are designed to replace in whole or in part, receive the students at approximately the age of sixteen, and give them from six months to four years of intensive practical and technical training, as preparatory to practical industries.

Intermediate industrial schools are those designed to take children at or near fourteen, and to give them the beginnings of vocational training for groups of related occupations, or for specialties. They do not assume to give trade training, but a practical preparation therefor.

A new form of apprenticeship has in recent years made extensive progress in American industry. In this, the apprentices are put in charge

of teachers who supervise their training and guarantee such a conduct of their practical work and theoretical studies as will produce wide vocational efficiency. The factory or workshop becomes the school, time is set apart for theoretical studies, and the student is engaged mainly in productive work. This form of vocational education may be adapted to certain industries, but it is not certain that it will be able to assume the disinterested attitude of the publicly controlled forms.

Conclusion

The demand for vocational education under school conditions is a widespread one, and is rooted in the social and economic changes of the age. Rightly organized, vocational education will prove a profitable investment for society. The pedagogy of this education will differ widely from that evolved for liberal education, and especially in respect to making practice, or participation in productive work, a fundamental element. Vocational education must be so conducted as to contribute to the making of the citizen, as well as the worker. In the course of the development of a progressive social economy, we may expect it to be made obligatory upon every individual to acquire a certain amount of vocational educa-

tion, just as the present tendency of legislation is to prevent any one from remaining illiterate. Vocational education is not in conflict with liberal education, but is a supplemental form, and may be expected to reinforce it.

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THE PEOPLE'S SCHOOL

A Study in Vocational Training

BY

RUTH MARY WEEKS

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AUTHOR'S NOTE

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RUTH MARY WEEKS.

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EDITOR'S INTRODUCTION

It seems to be difficult for us to learn that human institutions may not be borrowed outright. The sight of some new form of efficiency in our neighbors over the sea stirs the conscious progressives at home to minute and wholesale imitation. This is particularly true where we feel second-rate, — in art, science, and education. In politics and industry, we are a trifle cock-sure of ourselves and copy scarcely at all; but elsewhere we tend to be over-impressed by foreign example.

The history of conscious educational reform in America offers many illustrations of indiscriminate institution-matching, all the way from the kindergarten to the university. There have been large gains, of course; but we have paid an unnecessarily high price in maladjustments. If only we had noted the essential elements of foreign experience and moulded the institutional forms to suit our own population and national ideals, we could have made our institutions far more effective.

Just at the present hour, when we are assuming a vast program of vocational education, we

should have a particular care as to the way in which we are influenced by European experience and example. The social currents of our own life can no more be neglected in the construction of new human institutions, than the laws of gravitation in the building of material structures. It is all a matter of concrete conditions — the place where we build, the materials used for construction and the purpose we have in mind. Our human conditions never are coincident with those in any European country, and we ought at the very outset to assume that no European system of vocational training will wholly fit our needs. This might be laid down as a first principle.

We shall of course need to study foreign practice. A truly rational progress is always founded upon the lessons of experience, and when we have had little of our own, we are bound to understand that which belongs to others. But certainly we need to give as close study to our own social and economic conditions as to the educational devices of a foreign land, for whatever we see in the latter must be transmuted in terms of the former. In no other way can we render foreign experience into practice economically and stably valuable for ourselves.

Just because the following monograph presents

the problem of vocational education with an approach and emphasis opposite to that of much current discussion, it is offered to the educational public with a special faith in its worth. The volume is more than a stimulating presentation of facts and generalizations; it exemplifies a method of studying a vital institutional problem that ought to gain a wider acceptance among our educational reformers.

THE PEOPLE'S SCHOOL

I

FOREWORD

THE fact that only nine per cent of the pupils who enter the early grades of American public schools finish a high school course should be the cause of serious concern to every citizen. The taxpayer may well ask himself why he contributes over twice as much for the support of secondary schools that benefit one tenth of the population as for that of those in which most children receive their only education. The educator must marvel that, with all the care and money lavished on our higher institutions of learning, they prove so unattractive to the majority of our children. And the worker for the public weal can find but a slowly widening outlook for social betterment when so small a per cent of the next generation are availing themselves of the means of improving their condition.

That the public school is the corner stone of American democracy has been reiterated until

it is the merest platitude, but like most platitudes, it is absolutely true. If the people are to govern, they must know how to govern.

The present is a time of feverish activity in all lines of philanthropic work. Social settlements flourish. The juvenile court is an established factor in legal procedure. Prisons are transformed into reformatories. Charity organization societies coördinate the work of a hundred different agencies for alleviating distress. And while these various agencies have been helping the victims of society, they have learned a great lesson. The cause of the distress they strive to eliminate is in almost every case ignorance. The ignorant mother fed her baby soured milk and it sickened. The ignorant consumptive slept in darkness and filth, with closed windows, and died. The ignorant voter sold his franchise to a boss and stole from his own pocket. The ignorant public allowed dark, unsanitary tenements to be built in its midst and found itself confronted with a slum problem. The ignorant immigrant contracted himself to a master for half a man's wages and his family starved. The ignorant parent took his child to work with him in the factory and reduced his income. Less obvious examples do not lack. Ignorance — public or

private: at this door can be laid most wrongs and most endurance of wrong. If, then, to borrow Emile Munsterberg's phrase, "The aim of social work is to make itself superfluous," the way to effect a fundamental betterment in social conditions is to combat ignorance. No matter how picturesque, no matter how intelligently conducted and undoubtedly beneficent such enterprises as reform schools, juvenile courts, poor-relief agencies, tuberculosis camps, and the like may be, their results are at best patchwork. They are necessary; they are magnificent; they are indeed educational: but they do not strike to the bottom. They make suffering more tolerable; and they also serve to show what an amazing number of things humanity needs to be taught.

It is true that the proportion of grammar school to high school enrollment has tripled in the last fifty years. Yet is it a too paradoxical inversion of cause and effect partly to explain our previous growth in high school attendance by the wide extension of free school facilities which has taken place in this last half-century? And is there not reason to doubt whether, under the present régime, this growth will or should continue? In other words, in settled communities where there

are educational opportunities for all, has not the attendance upon high schools of the orthodox academic type reached a comparatively steady ratio to population?

Thus we return to the point that because education is the only sure instrument of progress, it ought to cause grave concern to every person interested in the welfare of our country that as yet so small a per cent of our children take full advantage of the opportunities liberally offered them.

The object of this book will be to explain why, in the opinion of the author, the attendance in our upper grades is so small; in what points our schools fail to meet the needs of our people; and how the course of instruction may be made more practical and thus hold children in school until such time as they are better trained for citizenship. It will also attempt to place the movement for trade education in relation to other social movements of the day. This discussion will be illustrated by a comparison with foreign methods, based on personal investigations of French and German schools.

Of necessity, these pages must repeat much that is an old story to students of the question. Indeed, the present work represents not so much

new arguments and conclusions, as a marshaling of old facts in a somewhat more comprehensive array than has yet been attempted. However, as Charles Warner wrote four years ago in *Charities and the Commons*, "Although the inadequacy of the public schools, as they are now conducted, to meet fully the greatest educational need of our times, is generally admitted, it may be questioned whether the influences that have brought about the development of a one-sided system of education, strong in the literary and scientific elements but weak and ineffective in vocational aims and results, are fully understood; whether the ultimate effect upon the productive industries, upon commerce, and upon society of a continuance of such a scheme of education, is generally appreciated; and whether the responsibility of state and municipal authorities in the matter is recognized."

II

THE HAND OF IRON

"A rational system of education will take account of changes in society and keep pace with their evolution." — ASTIER.

YOUR true pedagogue is essentially a man of the world. He looks abroad to see the life for which he must train his pupils and thereby shapes his program. Before we can intelligently criticize our school system, we must formulate a definition of society to serve us as a touchstone. Judging by the direction of the most vigorous creative activity of the present day, we may say that we live in The Age of Industry. As feudalism was the supreme offering of the ninth and tenth centuries to history, so our industries will be our contribution to progress. Into them go the imagination, the inventive genius, the daring of the American people.

Our industry has peculiarities which distinguish it from that of the Middle Ages, when Holland and Belgium and Italy were humming workshops and the merchants were princes even as they are to-day. Then men labored with their

two hands, and from their skillful finger tips there passed into their work something of the very life and thought and feeling of the craftsman, until every most trifling product, every cluster of stiff roses carved on some blackened stick of furniture, every curious bird and beast tucked into the stonework of old churches, seems humanized. But industry has long since ceased to employ the hands of its workers. It uses more and more the iron hand of the machine. To write, to sew, to embroider — M. Brizon[1] details a dozen processes in which the machine with an almost uncanny dexterity supplants human fingers. With what vividness was the saying, "The man does not work; he watches the machine work," brought home to me in a New Haven screw factory! There in a long dark room stood row after row of machines, all operating with a low, clicking sound. Each row represented the entire process of manufacture, from the time the steel wire was wound off a reel into the first apparatus to the moment when a completed screw dropped into a box behind the last machine. Several girls walked about the room and transferred boxes of

[1] Pierre Brizon, author of *L'apprentissage: Hier — Aujourd'hui — Demain* and professor in the École pratique d'Industrie de Rennes.

half-finished screws from one machine table to the next. This was their whole occupation. The reason for this was suddenly apparent when a long jointed arm of steel stretched out slowly from one machine to the box of raw material on the next table. A two-fingered hand at the end of the arm closed on a screw, lifted it with precision, opened its clawlike fingers, and dropped the bit of steel into position. As these hundred iron hands silently performed an almost human function, something of the terrible power of machinery over the human lives that obey its dictates and surrender their minds to its mind was impressed upon me.

This possible subservience of the man to the machine is the point where education must act for the protection of humanity against automatonism. The machine is in reality an extended hand, just as the pen is merely an extended finger. As the finger obeys the dictates of the mind, so in turn does the pen. We are not dominated by our writing apparatus, but dominate it. Man is continually appropriating parts of his environment and so joining them to his body. The typewriter, for instance, is a more skillful, elaborated hand which enables the mind to dominate more perfectly its writing apparatus. Larger and

more complicated machines are also only extended hands developed to give the intellect greater freedom in carrying out its inspirations. Yet, far from giving greater freedom to the operator, the machine often kills life and intelligence. The weary operative in the cotton mill comes home from his day-long crossing and recrossing of shuttles, stupefied, incapable of rousing himself to social pleasures without alcoholic stimulus. The one hundredth of a shoemaker clips on buttons year after year until his mental horizon is bounded by the circumference of a button. The man is dominated by his machine; instead of his using the hand of iron for his own purposes, it has him by the throat.

In commerce, the bookkeeper, the clerk, even the directing manager himself become slaves of the business organization, of routine, of a disembodied machine. For what is any machine but routine immutably fixed in wood and steel? In every department of public service, the wheels of institutionalism grind on, relentlessly crushing personality and overwhelming individual initiative by their tremendous inertia.

Extreme specialization in industry has turned man into a human tool instead of an independent, self-directing individual. Machinery has ren-

dered a long apprenticeship and the mastering of all the details of a trade unnecessary. A worker can learn a single process in a few days and begin remunerative work at once. But the narrowing results of over-specialized labor soon begin to show. It becomes impossible to teach him more of the trade in general, because his brain is stunted, and all his life he remains an unskilled laborer in a poorly paid, deadening position. If the operative enters the factory very young, and if he survives until he is sixteen, his brain becomes so atrophied that unless he has previously learned to read and write, he can never acquire even these rudiments of an education.

With the introduction of this extreme specialization in industry has come a general decay in the old forms of apprenticeship that were once the safeguard against its dangers. Formerly a laborer learned a whole trade; he was resourceful; he could turn from one occupation to another; at least he understood the relation of the operation he performed to the entire process of manufacture. He had some intelligence about his work, some relation to the finished product. But the day of small employers with small shops, where apprentices could be profitably received and thoroughly instructed, is past.

There remain amazingly few industries which still take apprentices. Investigation shows that, out of four hundred establishments in Ohio, only sixty had apprenticeship systems and only three aimed to turn out first-class mechanics. It is true that certain large corporations, such as the New York Central Railroad, have regular schools of their own for training apprentices, but as one shop comprises many trades, this is possible only where very large numbers are employed, and even then is such an expensive undertaking as to burden any but the wealthiest company. William Dooley, of the Lawrence Industrial School, claims that only one third of one per cent of men between fifteen and twenty-four receive instruction bearing upon their occupation, and the educational path of even this infinitesimal fraction is rough and crooked. Union men give little adequate help to raw recruits, as they fear to create competitors for their own positions. Large concerns find the rush of production too great for them to spend time and material on apprentices. It pays better to put a man at once to work on some swift minute process, which he can learn without practice and perform without waste; and the narrow margin of profit in many smaller shops also leads their owners to use "little workers"

on odd jobs with no educative value, but from which direct financial profit accrues to the business. The baker's boy is seen running errands instead of being taught to bake bread; the child in the mill stands by and hands bobbins to the man at the spinning-machine — a necessary link in the process of manufacture, but not an employment calculated to develop an intelligent, self-supporting adult worker.

At the present time, when there is the greatest temptation to the abuse of apprentices, we find no laws on our statute books to protect the child in industry and to procure him proper trade instruction. Formerly the law was very strict in this regard. An employer could not receive apprentices into his shop without giving proof of his ability to instruct them. The number of apprentices per shop was limited to insure each one his share of attention, and failure to perform his duty toward his apprentices cost the employer the privilege of receiving them. Before entering upon the practice of his vocation, the apprentice submitted, to a committee of judges chosen from the master workmen in his trade, a finished piece of work as guarantee of his capacity. Thus were the intelligence of the individual worker and the standard of the trade safeguarded. This medi-

eval system fell into gross abuse, but the abuse was due to a fault, not in ideal, but in administration. The system was designed to uphold excellence in workmanship, but the unregulated corporations, or free guilds, dominated by the employing class, used it to uphold their own power, and so brought about stagnation in industrial methods.

But the day of apprenticeship is, as we have said, over. It is not now a question of writing laws to protect apprentices still left in isolated industries. It is a question of what is to take the place of old-time apprenticeship as a training for life work; of what is to insure us a generation of competent laborers, of inventive workmen, not mere cogs in the machine but WORKMEN who will contribute creative mental effort to the progress of industry.

In spite of the success that attends modern production, results of the subservience of the man and his mind to the machine are not far to trace. Enter a large department store and walk past counter after counter heaped up with salable wares. Banal, senseless stuff, much of it! That a great improvement in some sections of public taste has come about of late is not to be denied. Arts and crafts work of a very acceptable

character is to be seen jumbled together with flamboyant rubbish masquerading under the name of art. Go into the furniture section: simple, sensible, mission wood forms a restful oasis in the gimcrackery. And yet even these promising departures from current bad taste seem to have no force left over to carry production beyond the first side-step. A new style once discovered, it is duplicated and reduplicated *ad nauseam*. Moreover, are not our most beautiful modern chairs and tables copies of this or that antique fashion? The china section is crowded with reproductions of Sèvres, of luster, of Wedgwood ware. The most harmonious rugs are antique or imitation thereof.

Walk down a residence street built some years back before the reproduction of older architectural styles came into vogue. What meaningless, formless houses! What unmitigated plainness or what ugly, helter-skelter application of inappropriate ornament! How self-contained the colonial mansion around the corner seems! Its walls and chimneys, porches and shutters, belong together. It is unified, artistic, fills the eye as a whole. But even in the newer streets lined with such houses of individual, though borrowed, beauty, one has a curious impression of incon-

gruity. A Southern house with spacious galleries fronts an old English manor; a Swiss châlet and a Queen Anne brick stand side by side. A Renaissance palace holds itself compactly aloof from a rambling Spanish Mission in stucco. And on opposite corners are a Jewish synagogue in perfect imitation of the Parthenon, and a Methodist church in German Gothic. One rubs one's eyes in wonder if this be a sober everyday street or an architectural mask-ball. One expects to see the residences whip off their motley and appear in modern American garb. But, no! There *is* no American garb for them to put on. Our civilization has not yet expressed itself in stone. It is not yet thoroughly enough unified, and when it departs from beaten tracks, falls into chaotic scrollwork and the like.

In such generalizations, it is possible to overstate grossly. To much that is said in the present chapter, the reader must make his own mental reservation. There is fortunately a reverse to the picture, but at this moment we are concerned with the darker side and with the reasons for its dimness. The inartistic, heterogeneous character of the bulk of our manufactured articles is partially traceable to the facts of production discussed in the foregoing pages. The first principle

of art is unity, wholeness. The work of art is an integral thing, the perfect expression of a complete thought or feeling. The man who deals in little scraps of life can never produce anything artistic. He can never write a novel — only a string of disjointed scenes. He can never paint a picture — only a huddled group of unrelated objects. He can never compose a melody — only a succession of isolated notes without cadence. Does he turn himself to humble decorative arts, the quality that fuses diverse parts together into a harmonious whole will be equally lacking. The border of Brussels lace has its laws of fitness as well as the symphony. The carved center table has the same claim to integrity as the drama.

But what of the producers of our laces and center tables, of our crockery and wall paper? Do they deal in complete thoughts and feelings? Do they deal in wholes, or only in scraps of life? Follow a simple article like a china tea cup through its creation in a New Jersey factory. Does it grow gradually beneath the hand that conceived it till it stands fragile and perfect, the line of gold within the delicate bowl prophetic of bright amber drafts, the handle molded for the touch of slim fingers, and the slender spray of flowers without the brim suggesting the evanes-

cent aroma of the tea? No! the process has been most unpoetical. The cup has passed through a hundred hands on its way to the delivery room. One man worked the clay; another molded it; another painted the flowers by a prescribed pattern; another thrust it into the baking-oven; another watched it and took it out, and so on till we reach a person whose entire function has been to put on the tiny spot of gilt in the center of each blossom. All day long he has done nothing but apply gilt dots to flowers on tea cups of whose origin he knows little, and of whose destination he cares less. If some one should invent a machine that could apply gilt dots with unfailing accuracy, the man would disappear from industry and no one be the loser. That he is a *man* counts for nothing. How can the laborer who makes so microscopic a part of an object contribute to its artistic quality? Of course he is expected to contribute nothing. He is blindly following the plan of another. Yet he is studying in the industrial school which must shape our national taste. He is dealing with mere scraps of his trade. When called upon to construct a tea cup of his own, will it not be an ill-assorted patchwork of forms and lines and colors?

A more obvious result of the entire separation

of the worker from the finished product is a certain deterioration in output which is prevented only by the greatest diligence on the part of inspectors and foremen. Here, too, caution must be taken not to overstress a partial explanation for a situation dependent on many causes. But it is only natural — mankind not yet being endowed with those ethical qualities that entail blind, minute, impersonal right doing — it is only natural that a man who adds a single spot of gilt to a tea cup will take less interest in having that cup perfect in every detail than if the entire article were the work of his own hands and would be known and criticized as his. In fact, "Tom Jones, his cup" will be much better made than "Tom, Dick, Harry, and nobody knows or cares whose cup." In these days of enormous factories and antagonism between labor and capital, we have lost much of the old personal interest in the honor of the firm which might once have taken the place of individual pride and bound every hand over to his best effort in even so small a matter as gilt dots. Therefore we have much that is shoddy and ill-made turned out upon the market, and as the market has a voracious, indiscriminative appetite which manufacturers do not neglect to stimulate, much that is hideous, use-

less, and undurable finds its way into our homes. *The consuming and producing public are the same; their respective taste and intelligence is a closed circle.*

This specialization is not only anti-artistic but anti-progressive. True it is that one cause of our industrial advance has been the specialization of hand processes until one man, in performing the same operation a thousand times a day, at last reduced it to such simple terms that a machine could take it over. But in the course of this development, we have lost humanly while we gained mechanically. In the past, the great inventions have come from the ranks of the workers. And though invention is becoming more and more a special profession, still, if we reduce this laboring public to automatic, unthinking machines, we are shooting a heavy bolt across the door of progress.

We do not need to go farther into the discussion to infer that society has created a mighty tool whose use we have not yet mastered, and which therefore bids fair to master us,—the iron hand of the machine. It is a case of how to prevent the tail's wagging the dog. To control and best utilize the mighty equipment which industry possesses, it goes without saying that we need a

skillful, intelligent labor force. That we seriously lack such a force is proved by the complaints of employers on every hand. C. W. Cross, superintendent of apprentices for the New York Central Railroad, reported some time ago that their shops were in straits for lack of well-prepared machinists. Mr. Thurber, of Ginn & Company, says: "In our work, we need skilled, thoroughly trained workers whom we find it more and more difficult to get. There have been times when, if there had been a place where we could send a promising man to learn things thoroughly, we would have sent him at our own expense and paid him a salary to go."

The National Educational Association, in its 1909 report, publishes the startling figures that fifty per cent of our skilled mechanics are foreign-born and trained and that ninety-eight per cent of the foremen in New York manufactories were educated across the water. In other words, Americans to fill such positions are not to be found. The demand for skilled workers is otherwise proved by the flourishing of private technical and commercial schools for adults who are trying to make up for lost time and fit themselves for the jobs they see monopolized by their alien rivals.

The American Federation of Labor, alive to the interests of American workers, has appointed a committee to look into the question of industrial training. One reads daily in the papers, one hears daily at the dinner table, discussions of the incompetence of workmen. At afternoon tea, dainty my lady can talk of nothing but "stupid Jane" and "inefficient John." There is even very grave suspicion whether, if my lady were deserted by Jane or John, she could wield domestic implements with greater effectiveness.

If we doubt the testimony of employers, we need only to mark the rapidly increasing force of vagrants who rotate each year from coast to coast; we need only to remember the unemployed for whom, during moderate prosperity, it is more and more difficult to procure work, and whose numbers in times of acute crisis in any special branch of industry are appallingly augmented. It is necessary to ponder on these peculiarly modern phenomena alone to become convinced that there is a tremendous industrial misfit between man and job. The two problems have many aspects which are beside the question here, but it is safe to say that the chief cause of chronic unemployment is lack of training for definite work, and that a common cause of acute unem-

ployment is minute specialization. The unintelligent specialist when thrown out of one occupation finds it impossible to turn to any other, and must laboriously acquire a new specialty or lie idle till such time as there is again room for him in his old trade. I have seen a comparatively high-grade worker idle for almost a year, because he was too old to be taken in as a beginner in some other industry. Business is very cruel to the old; it will not waste time sharpening a worn tool when bright, new ones can be had.

The overcrowding and consequent underpaying of the nonindustrial pursuits is another sure sign of maladjustment. For certain manual work it is impossible to find American labor, and were the positions not filled by the ever-arriving immigrant of doubtful capacity, industry would come to a standstill for the want of any helpers, good or poor.

In short, the industrial situation may be summed up as follows: standards of production are open to improvement; employers are finding it difficult to procure intelligent, skilled, resourceful workmen, capable of turning from one branch of a trade to another, and of advancing from less to more skilled positions; an ever-swelling class of unskilled laborers is being created; the num-

bers of the unemployed are growing; and many manual tasks would remain undone were it not for the influx of only half-desirable foreigners.

In spite of the fact that we have ridden on the crest of prosperity, in spite of the fact that as a manufacturing country we stand among the first, the far-sighted man will herein detect symptoms of disintegration. Although we are confronted by no such "crisis in apprenticeship" as has destroyed the century-long French preeminence in hand industries, the political scientist may well strive to forestall that conceivable event. As a nation we desire to be self-sufficient; as a people we desire to be strong and intelligent. The dominant factor in our national development we must not neglect. Certain social phenomena of poverty and crime are manifest among us, phenomena which have absorbed the attention of the public to the exclusion of the deeply underlying fact that, living in an age of industry, we have not yet learned how to be wisely industrious. Apprenticeship is a dead letter. Where shall we learn?

III

THE PUBLIC SCHOOL

THE American belief in humanity is embodied in our public schools. Biologists tell us that children are born much more nearly equal than we have dreamed, and that not nature, but starvation has produced the myriad of stunted beings who cumber society with their unprofitable lives. To smelt this crude ore of human possibilities into serviceable gold, we have public schools. The creed our fathers held, when they declared for liberty and equality, is still ours. We believe that all men have a right to be of as much use as they can in the world, and we prove our faith in the perfectibility of all our people by investing in their education.

Therefore the public school labors to open the doors of culture to every child within its jurisdiction. Equality of worldly goods we cannot have; but at least in the schools we shall have democracy of training. An ideal type is held before us as the goal of study — the "all-round man." No undemocratic limitations must be put

upon the growing boy. His education must be fitted to the highest as well as to the lowest circle in which it can be his lot to move. Therefore early decision upon a future calling is discouraged, lest perchance a Shakespeare should tie himself to carpentry before his genius comes to light. And so, having insecurely bagged that slippery eel, general intelligence, the high school graduate sallies forth upon the world in search of what fate sends his way to do. (Unawares that "insecurely" slipped into the sentence.) Just as unexpectedly an undemocratic element has crept into education through the would-be democratic effort to keep it the same for all.

Naturally enough, when men first struggled for freedom, it was in the realm of abstract knowledge that they found themselves least bound by the limitations of everyday life. Rich and poor could multiply with the same accuracy and, when polished to the proper brightness, read literature with the same fervor. On this wide common, they could disport themselves untrammeled by the economic facts that sent one to school in broadcloth and the other in shoddy woolen. Mastery of these cultural branches had also been the mark of gentility, and to introduce into popular education everything previously monopolized

by the upper classes was the first step of liberal reformers. Much the same process has been repeated in establishing higher education for women, and, of late, in the education of the negro. Those coveted branches long appropriated by men were studied with avidity to the exclusion of many things important to the well-being of women; and too many a negro, in order to be exactly like the whites, has striven after Latin and Greek to the detriment of his own best interests. As we find conceptions of woman's education calculated to make women resemble men, just so the democracy of the founders of our present generally accepted theory of education seems to have been to elevate "the masses" by recasting them in an "upper-class" mold. Thus the public school is the embodiment, at once, of a democratic attitude toward men, but a most undemocratic view of the social organization.

The result of this experiment is "class education" in our secondary schools. At most, only ten per cent of the pupils of the ward schools go through the high schools. Three fourths of the pupils enrolled in the first year of the high schools drop out before the end of the course. Among those who remain, more than half are girls, and of the typical graduating class the majority either

go to college or enter professions and commerce. In other words, only those who are destined for professional and commercial life attend the public high schools, *or the training given therein fits pupils for and directs them towards professions only.* The truth holds much of both hypotheses. Uniformity, always infinitely undemocratic, has, in the methods of our really excellent high schools, proved unfair to an overwhelming majority of our children, who, because they belong in a walk of life for which the secondary schools do not fit them, drop out with the bare rudiments of a general education, long before they are prepared for the intelligent citizenship upon which the security of our government depends.

A glance at the average high school curriculum, from the point of view of the more than seven millions of our citizens who are employed in industrial and manual pursuits, explains the situation. Mathematics and history, science, language and literature meet our eye. But the unlettered laborer looks in vain for something that will make his son a better locksmith or bookbinder, and he ponders deeply on the problem of how his boy can afford to spend four years in the pleasant pursuit of culture, while he himself is waxing old and less able to care for his

family, and may even need support before the boy is in a fair way to make a living. It is snobbish to suppose that the average working parent is not interested in the welfare of his children; that he always sends them to work when the age of compulsory school attendance is over, through selfishness alone. If the poor father has any hope at all, it is usually for his little ones. He will sacrifice much and work early and late that they may have a better chance than he. It is safe to hazard that, next to earning bread for the morrow, there is no subject on which he does more thinking than the future of his children.

The workingman, then, has decided against the high school. An ignorant decision? Perhaps not so altogether philosophical and fine-spun as the one you, intelligent reader, are making by the warmth of your fireside, sunk in an easy-chair, secure of your future, and dallying with this book half quizzically as with a subject that arouses curiosity, but not your vital interest. But he has experienced the hard facts of life, and knows that how to earn a living and earn it well is the paramount question which must be settled before love and happiness and beauty, before life itself can begin. You tell him that if his child remains in school, he will be able to earn more

in the end than if he goes at once to work and climbs the industrial ladder without further education. You tell him that his boy will be able to turn his hand to many jobs; that he will have more general ability, more chances. But he knows that production demands men who can do some one thing skillfully. He sees that skill is not so easily mastered; and he fears to have his boy lose time which should be devoted to acquiring dexterity that can command a man's wages for him when he is a man. You suggest, again, that if the child stays in school, he will be able to raise himself above the level of manual toil, and will in this field certainly outstrip the untutored applicant for work. Yet perhaps the rough-handed laborer will know how commerce is already over-full of helpers, and how at the skirts of the genteel professions trails a great army of unnecessary, unsuccessful men who hover ever between industry and gentility, crowded from the latter by competition and shut from the other by inclination and unfitness.

Why shut from the other by inclination? Is not the whole atmosphere of the classroom in our high schools anti-industrial? Is not the emphasis ever upon intellectual achievements in the realm of letters and art and abstract science?

Does not the butcher's or the machinist's boy seem to breathe another ether here than in his own home? What use has the school world for the facts of his father's life? What use has his father's life for the facts of the school world? Use enough, if he saw the truth! But he rarely sees it. And does he not naturally infer some innate difference between these two sections of life, and also the superiority of the school world, with its beauty, its wealth of new information, its quick interchange of thought with eager fellow students, and its inspiration from sympathetic teachers glad to foster a growing taste for culture? What do we do to convince pupils that Shakespeare is as much in place on a tinsmith's table as on a jeweler's? What do we do to interest them intelligently in the pursuits at which one half of them must spend their lives, and, as ex-President Roosevelt puts it, to cure them of the idea that to earn twelve dollars a week and call it a "salary" is better than to earn twenty-five dollars and call it "wages"?

Manual training advocates will here slip between the lines the plea that their departments inculcate respect for labor, and that they offer the practical application of theoretical knowledge for which we so loudly clamor. The question is,

indeed, of great interest at this point in the discussion. The manual training teacher has grasped a great psychological truth; he stands for balance, for purposeful use of the finely adjusted bodily mechanism with which we are endowed. There is a bit of the ancient Greek in his democratic view of personality, of body and mind as an interacting whole. But he too ranks with the "generalists." His work is but practice work, designed to foster an all-round facility of hand, important as a means and fatal as an end.

When manual training was first introduced into high schools, its strictly developmental function in the curriculum was mistaken for practical trade instruction by many parents in a class whose children had not hitherto gone to high school, and a large increase in enrollments followed. But when the public saw that, valuable as the new experiment was and is, it was not the threshold to industry, that an apprenticeship was still imperative before wage-earning could begin, the disproportionate increase in school attendance merged into the normal increase, and the situation remained almost as before. Classes have, indeed, been organized in many schools which prove not only developmental but of immediate practical service, and these classes have

held many a child in school who would otherwise have gone at once to work. In this regard, girls have fared better than boys, for manual training for girls has invariably taken the form of sewing, cooking, or millinery. But these studies, as well as sloyd, electricity, ironwork, and sometimes even the long-established commercial courses, count little in the school credit systems. In this forward step we are again dragging the old ball and chain of wrong emphasis. For while learning should teach us to bring to bear upon our life work "the best that is known and thought in the world," we are still leading too many of our children away from their life work; leading them to suppose that it is really unworthy, by putting it in a secondary position in our courses of study.

For the same reason that so few children enter the high school, many drop out at the end of the first year. The boy, especially, finds the high school course too often unadapted to his wants. In the first place, boys are outnumbered, for since the economic pressure is not yet so great upon girls, they stay longer in school. In three cases out of four, also, the instructors are women. There is no doubt that the influence of women on adolescents is strong and good, but the excessive feminization, too often seen in curricula

framed by them for pupils, the majority of whom are girls, makes the boy feel awkward and out of place in the program. Because literature is so often taught from a feminine point of view, with which the decidedly non-soulful, normal boy is utterly out of sympathy, he comes to the erroneous conclusion "that it is all rot anyway," and misses the inspiration, the glimpse into a world of keener beauty and the future fund of resource within himself that a manly love of reading should bestow. He becomes restless under the routine of work; he does not see where it is tending; he stops studying, and his school attendance becomes a mere wearisome seat-filling. Or perhaps there is an occasional holy infant who, though uninterested, studies his lessons just to get them, for, being good, he does as he is told and asks no questions. Fortunately this type is rare. You may browbeat girls *ad libitum:* not all girls, but girls in general. They are of the accommodating sex. Custom and heredity have made them pliable. But the boy is a stiff sort of twig and hard to bend. The mill may grind on; he remains obstinately irreducible, and quits school after a while because he sees "no sense in it," and longs for something "worth while" on which to lavish his young energy.

The author once had in an English class a splendid sort of chap, though crude as yet. One day he came with shining eyes to tell of a wonderful chance to earn sixty dollars a month that had just been offered him, and that looked a glittering independence to a boy whose father had never allowed him any command of money. Except in wood-turning where he led his class, his work took, for the moment, no alluring form. He needed schooling, needed it badly; but I found it hard to answer when he said with sudden penetration, "See here, I know I'm raw and green and use bad grammar off and on. But I'm not doing any good here. Maybe it's my fault, but I can't seem to hitch on, and all I learn in high school won't help me to make more than sixty a month when I begin. It's all right for Dodge and Kelly and those fellows who are going to college or into the law. But dad can't send me to college. I've got to earn my grub right off and I might as well start in." Nothing will hold a boy when independence calls, except the surety of greater profit to himself or a strong personal interest in his work. Both were supplied to "Dodge and Kelly" by their careers. They could refer present dryness to the future for illumination. But our ordinary boy was getting all the

education he would ever have and naturally demanded that it be worth "more than sixty a month." It is needless to say that sixty dollars a month is an exceptional alternative to further schooling. As Dr. Kingsbury's[1] investigations in Massachusetts prove, an errand or office boy's job is nearer the average. But whatever the bait, and however short-sighted the choice, the motive for leaving school remains the same, and is equally imperious.

The lack of practical interest in high school work is too often intensified by a lack of vitality in teaching, from which the college preparatory student suffers as much as the boy destined for industry. In the same spirit which omits practical branches from the curriculum, the instructor often fails to make constantly the connection between what is taught in school and the actual facts of the children's experience. History gets to be a world shut in between the covers of a book. Physiology and hygiene are something to recite about and not to apply to the ventilation of one's bedroom. Mathematics becomes an abstract juggling with figures. Even literature, that hardest of subjects to kill, falls into the cate-

[1] Susan Myra Kingsbury, of Simmons College, investigator for the Massachusetts Commission on Industrial Education.

gory of things to be learned and not lived, and, instead of opening their eyes to the undreamt wonder of the world, succeeds merely in giving children a positive distaste for books. Against this petrifaction of school work, every instructor fights. Live teachers die hard, if we may put it so. But a huge machine, such as the ward schools of a large city, or the numerous departments in a high school, acquires tremendous momentum. The wheels once started, a course of study once drawn up, the thing moves on irresistibly, flattening out individual method, and conforming all to the preconceived pattern. And still this mechanization, which victimizes, first teachers, then pupils, is necessary in the administration of large scale education. System we must have, only, please God! let us not magnify the system into an end, a something valuable in itself to which our pupils can be sacrificed. M. Brizon has astutely remarked, "It is convenient, no doubt, to have recourse to routine; but the school is not made for the convenience of the masters; it is made for the best development of the varying faculties of the pupils." Yet when the classroom fills five or six times a day with thirty new faces, is it not natural that after draining his energy in the mad attempt to be a hundred and

fifty people, to understand a hundred and fifty needs and feelings, to lead a hundred and fifty lives, the master will some day fall back into the arms of routine which makes all things plain and easy? Will he not some day, unable to keep in touch with his pupils, begin to teach the course of study for its own sake? Will he not begin to show signs of irritation with the pupils whom it does not fit? Will he not call them dull and stupid, and even end by disregarding them entirely? And will not the children who come from his hand be clipped and trimmed out of originality into uniformity, as like as possible to the Imaginary Pupil for whom too many a course is planned, and who has no more actual existence than the Economic Man of the old economists?

We have ridden our favorite hobby a little aside the question, but not so far that a straight bridle path will not bring us out again on the main track, and set us jogging toward the old point that our expensive high schools are "class" schools whose pupils are drawn largely from one class of society, and which produce solely applicants for that class; and that the boasted democracy of popular education has evolved a system which "prepares for everything in general and nothing in particular."

IV

A SCHOOL FOR THE PLAIN MAN

WHILE pedagogues were arguing behind closed doors the perennial question of the Humanities versus the Modernities, the facts of life, which have an inveterate habit of keeping in advance of thought, came knocking without and crying, "In God's name, open! Dispute no more whether air or water is most necessary to our children's life, but bethink you what meat you will set before them, for they are sore hungry and would eat!" The facts of life and their good friend common sense demand a school for the plain man. Industry no longer trains its workers; and yet they must be trained. M. Astier and his colleagues[1] have struck the sensible and philosophical note with French directness when they maintain that "in our epoch of feverish activity, we cannot leave to routine the task of regulating commercial and industrial operations. Science is the prime factor in all progress." Industry needs not only the scientific knowledge of its great

[1] Astier et Cuminal, *L'Enseignement Technique.*

directors, but the scientific, understanding spirit of every man along the line.

To foster this spirit is the duty of educational institutions from primer grade to university. The movement toward such an orientation of studies is well begun in our colleges, and schools of this, that, and the other practical branch spring into existence in every state. The link between theory and practice should be drawn even closer. Many of the lower schools also must grow into laboratories of industry where skill of hand and skill of mind are taught and our young folk learn that intelligence and daily living should be synonymous. Then only will the high school ideal be fitted to the demands of our society. Then only shall we supply to the world what the world asks of us — a skilled worker. To beat about the bush no longer, common sense demands trade education.

The voices which stoutly declared that the standard of scholarship was sure to fall when manual training entered school curricula now rise again in lamentation. Prophecy is an uncertain rôle; and an advance verdict as to the influence of trade education on general scholarship may turn out as wide of the mark as the premature fusillade against manual training. But

the writer finds it natural to hope that a salutary reaction on educational methods will follow the establishment of trade high schools.

In the first place, the dominance of the college preparatory ideal, against which so many principals are now struggling, will be permanently broken. In academic high schools, a single eye can be kept upon college as the end of every course, with the conceivable result of a far more thorough college preparation than at present. In the trade school, the child to whom college is a mere disturbing impossibility, will be free to study what he needs. Class education, you say? One sort for the laborer; another for the brain worker? But we agreed that differentiation was essential to democracy, and that no class education could be so disastrous as that invidious species which now masquerades amongst us as "popular." And will it not be infinitely fairer to all concerned when fewer things are studied, but are studied well? When each child gets his due instead of being fed an indigestible mixture of what is good for each? When the college preparatory student need not waste time on sketchy courses he will duplicate later in detail? When the manual worker will not consume costly time stolen from his trade, in mastering branches that

belong to another scheme of life than his? And when the harassed teacher will no longer be distracted by the necessity of basing a general intelligence course on college entrance requirements, and of teaching everything superficially because he must teach enough to meet at some point the needs of every part of his mammoth, heterogeneous class?

Here we may note that trade schools mean smaller classes, and more of that personal relation between teacher and pupil which makes for vividness, originality, and inspiring work, and whose absence is accountable for the impersonal dryness of so much teaching. The Philoctetian howlings of academicians, wounded in their dry-as-dust supremacy, must again drop into silence.

Each argument advanced for manual training holds in the case of industrial training with threefold force. The child is essentially creative and practical. Theoretic teaching needs illustration to have weight with him; and he needs a physical outlet for his ideas. What general manual training adds to the curriculum of an academic school, trade work would contribute in the industrial school, with the advantage of even greater interest and vitality. Even academic education will emerge from an alliance with trade instruc-

tion, strengthened, deepened, and dignified, and will but come more fully to its own.

However the balance of power among scholastic principalities may settle itself after the new invasion, the world at large will reap substantial benefits therefrom. Obviously, larger numbers of children will go through high school, numbers steadily increasing as the profitableness of trade education becomes manifest. Reason would prove the point beyond cavil had we not French experience with actual vocational schools to fall back upon.[1] In 1905, the number of secondary schools in France had quadrupled since the recent establishment of professional education; the number of pupils had quintupled. This disproportional increase came almost entirely in the trade courses, which were, as they still are, so utterly inadequate to accommodate the demand that there has always been a long waiting-list. The ratio of graduates to first year enrollment proved correspondingly larger in these practical schools, and the comparatively high percentage of attendance was a sign of the favor the work found in the eyes of children and parents.

This favor is principally due to the greater wage-earning capacity of the trade school grad-

[1] René Leblanc, *L'Enseignement Professionnel en France.*

uate as compared with the young worker who has spent the same number of years in a shop. Suppose, for instance, that, of two boys who leave the primary school at thirteen, one goes at once to work in a furniture factory and begins to earn money for himself, and the other is sent for three years to the cabinetmakers' school. The young apprentice twits his comrade over the latter's dependence, while he, young lordling of his franc or two a day, has money to spend. After a while, the other boy graduates from trade school and comes to work in the same shop with his friend. At first, he is a little slow and wasteful, not being used to the rush of competitive production and the economies of business. His wages, in the beginning, are lower than those of the more adroit apprentice, who twits him further on having been three years at school to learn a trade which he cannot practice so well as one who never had a day's more schooling than the law requires. But at the end of a year, the young graduate has caught up with trade conditions. He shows a remarkable intelligence and adaptability. He has ideas for this and that bit of decoration. A fellow workman is sick and it develops that he can take the place, not so well as a skilled hand, but far better than the average apprentice. He is val-

uable to the shop and forges ahead, till, of a sudden, the once scornful friend wakes up to the fact that he has been left far behind in the race for advancement, and that, while his own wages remain at much the same level, those of the trade school graduate are already in advance and show every prospect of further rise. The purchasing power of money is too different in France and America to make actual figures illuminating, but the gist of many tables is embodied in this suppositious instance.[1]

The superior workmanship betokened by greater wage-earning capacity is explained by comparing the training these two boys received. One was started and kept at work on some simple, easily acquired process, which he will go on performing for the rest of his days. The other has not only sharpened his wits by general instruction, but studied his trade in all its bearings. He learned to know a dozen implements instead of one; to understand a dozen operations. He followed the product from its inception in the mind of the designer to its completion and transfer to the school salesroom. He designed himself almost everything which came from his hand, and took

[1] For items see Pierre Brizon, *L'apprentissage* and the reports of the French Minister of Education.

that pride in the material expression of his own ideas that leads more surely than any other motive to care and finish. Making a piece of furniture is more to him than a boresome stint to be done before coveted francs can be acquired. He has a personal, intelligent interest in his task. He can take hold of a new process with ready comprehension, and, when thrown out of work in one branch of the trade, he can fall back upon another. He is independent and destined to rise in his profession, just as surely as the average untrained worker is nailed to his first, poorly paid job, and so swells the class of the permanently unskilled who crowd the market and lower wages in good times, and in seasons of depression form that menacing, hungering army of the unemployed.

Perhaps French workers may not have perceived all this; but they have seen beyond a doubt that, because he can produce at once upon entering the shop, it is easy for the trade school graduate to get a job. No time need be wasted in breaking him in, for, in spite of his faults, he is not raw; and though the verdict of employers is far from unanimous in all details, the consensus of opinion is that, *if* the trade school graduate adapts himself to actual industrial conditions,

he makes up for early lack of dexterity and, in the end, far outstrips all his competitors. German opinion has already crystallized into legislation which renders industrial training obligatory, and in our own country many a scattering proof of the employer's recognition of its value is given by half-time classes for apprentices.

Of course not every trade school graduate achieves complete success, for there is no magic in industrial training that can develop inferior endowments to a high level of efficiency. Heredity may be molded, but not eradicated. Yet the child of mean ability may perhaps receive from such education the greatest proportional benefit. As mental defectives are awakened through concrete manual exercises, so the pupil of limited capacity may be roused by practical instruction to make the most of himself, and thus escape the failure that awaits undisciplined mediocrity.

Trade education is not a paying investment for the individual only. "In the international struggle for commercial supremacy the balance must tip in favor of the land whose workers are most skillful and intelligent." With our toilers lies the standard of national handicraft. It lies with them to support this standard against foreign labor *at home* and *abroad.* Not all the tariff bulwarks in

the world can forever protect us against the encroachments of superior production. Dam the currents of industry as we will, they set inevitably toward quality. Germany has stolen the French market out of the very lap of protection. How gloriously "fit" must a nation be which can look forward to free trade, as many a wise judge of things maintains America is doing! How sinewy in every limb, firm knit for the race, steady-eyed, bold-hearted, with no load of incompetence upon her shoulders! Such a load, alas! we shall carry so long as the sins of Europe are visited upon us by unchecked immigration and so long as we grind men and women to a worse semblance of things unhuman in our own factories, and make no effort to counteract by schooling the benumbing effects of unenlightened toil.

No little contribution toward our national prosperity will be that content with manual labor which should come from viewing it in school as a worthy end of intellectual study. Much slipshod service is now rendered by persons who look upon manual work as a mere stepping-stone to something else, or as a makeshift for those who fail of rising higher. Woman's temporizing position in industry half explains her lower wages, and many a man fails of success because he gives inferior

execution to what he deems inferior work. Manual labor is not a coil to be shuffled off at the first opportunity, but something that will remain with us always until we cease to need our bodies for other than vegetative purposes and become, as some pessimistic magazine scribbler has predicted, a degenerate human barnacle on the machinery by which we live. Rather than this, let us set all our writers plowing; our Rothschilds and Carnegies to hoeing beans; and put fire to offices, libraries, schools, and the whole paraphernalia of finance and culture. There will always be work for hands to do, and the public welfare demands that the men who perform it be as manful as any other. Here, as elsewhere, we can afford to have no contemptuous slovens.

To usher the young person into active life, equipped with the wherewithal to live, concerns not merely the economic efficiency of our workers; not merely the quality of production; not merely our national supremacy in trade. It concerns the moral integrity of our people. Whenever the corner stone of a new reform school is laid, the gods must ask each other laughingly, "How many more Elmiras will it take to show these mortals that one trade school is worth six reformatories?" Human interest is a crab which, crawling back-

ward, makes many a false start before it gains its end. Just now, it has taken a long look at crime, seen something very real and true about its causes, and, whirling round back end toward the goal of righteousness, has begun plowing away with terrific kickings and much flying-off of industrial sand and pebbles. But where is the queer fish coming out? At the reformation of an ever-recruited band of criminals! When a man has sinned, we see clearly the whys and wherefores; see that most men fall into crime because they cannot make an honest living;[1] resolve to teach the poor souls a trade; hurry them off to an Elmira in order to do it, and send them forth in seventy-four cases out of a hundred, completely reformed, with habits of application and a steady job. "A fine work!" says humanity; "a noble, inspiring work!" A noble work it is, and its best results will have been attained when the public has the genius — or common sense — to infer: if lack of a trade, if distaste for work, if habits of shiftlessness, bring a man to crime, why not teach a trade, why not give love for work, why not inculcate industry before the man becomes a criminal, and thereby save him and society the cost of sin? The

[1] Only two per cent of criminals in Massachusetts prisons have a trade.

criminal is a misfit. Alter him if you conveniently can, but cut out no more men on that pattern. Nay; alter the pattern, if you must let the misfits go. The still unspoiled stuff of humanity is your paramount concern. Leave over patching and darning ragged individuals, and bethink you how you will save the whole ones from tatters. *To keep the normal individual normal, this is the problem of the social worker.*

"Everything," a witty lady once remarked, — "everything is done for ragamuffins, but my ordinary little boy has to struggle along as best he can." When we have learned to do for the ordinarily good and bright boy what we do, too late, for truant Jim and pilfering Joe, we shall find more than one probation officer drawing better pay at another job. The child now comes out of school at a critical age. Child labor laws may, at first, keep him out of work, or the circumstances of his parents, coupled with lack of interest in any definite occupation, may lead him to idle away his most formative years. His youth[1] condemns him at best to juvenile pursuits where employment is unsteady and the ever-shifting environment conduces to anything but applica-

[1] Boys are not wanted in skilled industries till they are sixteen. Massachusetts Commission on Industrial Training.

tion and firmness of character. If he lives in the city, he is subject to a thousand rapidly multiplying temptations. He is released from the discipline of the school and at the same time begins to have less respect for home restraints. Parents assume a different attitude toward him when he becomes a bread-winner. He has practically no guidance, and the large increase in recent years in child criminality proves that he has often fallen a victim to his adventurous inexperience.

The case against child labor is too long and too well understood to bear repeating. Every one knows how much more heavily the strain of overwork tells upon children than upon adults. All need repose to repair waste tissue and expel the poison of fatigue. But the child must not only repair : he must build new tissue. No wonder that the growing boy or girl, confined for a long, hard day in a factory, falls speedily a prey to nervous and gastric troubles. No wonder his growth and intelligence are stunted, for the food which he consumes, the energy which generates within him, must go into work and systemic repairs, instead of into building new muscle and brain cells. In spite of all our knowledge and conviction, however, child labor laws fail of en-

forcement for lack of complementary measures. But compulsory education, especially if extended beyond the grades, will never be effective until parents recognize that going to school is more profitable than immediate work. Until that time will they evade the law; and until children can actually gain increased wage-earning capacity in the school, it will be an open question whether we can claim the right of compelling their attendance. How much more must this be true if school unfits them for their proper task!

The social advantages of sojourn in the trade school are not merely negative. Watch a roomful of children engaged in some practical work. How bright and eager they are! They are having a good time, as children have a right to do, even in school. The pleasure which children take in the practical part of their work spills over onto the rest of the course. They see the "hang of things" better. Their mathematics, drawing, and history have an obvious use — also less obvious ones of which they do not dream, but which function quietly and surely. Unconsciously during the years while the child is learning his trade, he is developing inner resources of culture. He gets into his mind something to fill it in leisure moments, something to think about. Perhaps he

learns in English class to love reading, a durable treasure that will last his lifetime. Not his the helpless, spoiled-baby type of mind which waits blankly to be entertained. He can amuse himself, and needs no tawdry picture show or corner saloon for recreation. His life is no longer flat and monotonous. His work is no longer deadening. He knows his machine as well as his work. He knows his materials, and as he toils mechanically, perhaps his mind follows them back to the mine or the jungles of the Amazon. Lives have been spent to get them; life is spent to shape them. And when the factory has done with them, they will go here and there over the world, to pay life back for what they cost. He understands the whole process of manufacture in his shop, and labors, not as a blind piston in the engine, but as a co-worker toward an intelligible end. Not mere dead wood and iron, but something live and real and interesting is passing through his hands; something stimulating withal. He is master of his tool, master of the iron hand; and work becomes exhilarating. All of which is most fantastic, says the hard-head. Will the fellow make better nails for such untimely ruminations? Certainly no worse ones; the business of nail-making leaving a great deal

of room for thought, room better filled with fantasy than with mere echoes of hammering.

Place in our times for fantasy there surely is; place for what is better and deeper — imagination. There is, indeed, something ill-nourished in the aspect of modern life, an insipidity, a monotony of design, a thinness of texture in the tapestry which bespeaks weavers of meager soul. The richness of perception, the spontaneous joy in nature, the freshness of mind and heart, the bubbling, blossoming fullness of life wrought into the naïve scenes of an antique arras across which the Lady, the Lion, and the Unicorn move nobly and gayly through meadows full of stiffly growing flowers and wee frisking animals; the bountiful heaping-up of beauty in the wreathed frames of fruit and blossom which encircle the madonnas of Della Robbia; the splendid lavishness of thought displayed in the tracery of a slim sword hilt from old Florence, — where does this find a counterpart among the products of our tradespeople?

Of course a great deal of sentimental whimpering about the "good old times" has been done by pseudo-historical folk. Even a sturdy spirit like William Morris fell to dreaming over a golden age of England which was, in reality, leaden

enough. But all these plaints contain a kernel of justice. In the study of past ages, we look upon the oases and reclaimed land of character. That certain tracts were once desert is not the terrible thing, but that a tract, once fertile, should fall desert again. And in the light of the Italian Renaissance; indeed, to go no further back than our own day, in the light of the greater "resourcefulness" of continental as compared with American environments, our daily life and all its adjuncts smack dull and flat. The toiler must needs season his existence with the acrid vinegar of dissipation, lurid theatres, and yellow journalism. We sadly need to dream a bit at our work; to vivify our common round. Nowadays, in every circle, we live in low relief. From Singapore to Paris, we wear the same cut of clothes, the same cut of thoughts. Ideas flatten themselves out thin as they diffuse over the globe. Convictions lose their depth and crispness. Even progressive Professor Royce, of Harvard, bewails the passing of provincialism with the rich and stimulating variety of mind and manners it insures. Uniformity, the world-old bugbear, has stepped out of the cosmic closet to rattle its dry bones amongst us, and the whirring of factories is but music for its dancing.

Against the leveling and numbing influence of industry, at least, the trade school would fight. Among men whose surroundings have stolen from them the right to even common thoughts, the trade school would work for a vast spiritual enrichment. In relation to their work, this deepening of experience would be greatest. Though trade instruction could not break down the thick walls of specialization, could not bring the man into closer physical relation to the finished product of his toil, it could tie him to it by a firm bond of understanding. It would open up to him a world of thought where he dreamed no thought existed. It would interest him in a world of homely things which now he deems unworthy of his interest, in stocks and stones and bars of steel. And it would teach him to express himself in these materials of industry, putting into them the fancy, the feeling, the loving care which would make our articles of commerce justify their etymology by being truly things of beauty, "bits of art."

V

TRADE EDUCATION AND THE WOMAN

THE great question mark with which to-day punctuates many an ancient usage is largest and blackest after the word woman. "The Woman Problem," "The Family," "The Economic Dependence of Woman" are expressions which stand daily in the press, which fall daily from the lips of preachers and lecturers; and the increasing urgency of the cry, "Votes for Women," proves that some readjustment is necessary if balance amid present unrest is to be preserved.

Discussion of the woman question rages hottest about the point which links it to our subject of trade education. What the woman's rights advocate calls the economic dependence of female on male, or, in simple terms, the fact that the average girl must marry to make a living, is said to have caused the age-long subjection of woman to man. Just as the monopolist employer can definitely fix living conditions for the workers in his trade, so have men, since the beginning of time, ordered matrimony and the life of woman after

their own liking. To keep women docile in their semi-slavery, their development as individuals has been subintentionally retarded by their masters. Now, however, that education has penetrated the feminine ranks, discontent breaks forth. The history of all slave rebellions repeats itself. Women have come into greater knowledge and are demanding freedom. Against this wall between woman and freedom, the efforts of reformers batter with deadliest energy. To hang no longer on a future husband for a livelihood has seemed to the harassed and downtrodden female the open sesame to self-respect and liberty. But economic dependence of some sort she can never escape. Every one, whether man or woman, is economically dependent, — on an employer, on a corporation, on consumers, or on the general public. The real point of difficulty is that in woman's legitimate trade, progress has been barred. The homemaker, housekeeper, and mother often lose touch with the currents of contemporary life and fail completely of being "human beings" because all their effort and time are consumed in laboriously performing the operations of their trade in the same unsystematic, wasteful manner in use in the Middle Ages. Because of this failure of the household to keep pace with general

industrial and social development, women have begun to find it too restrictive. They recognize that they are being cut off from fullness of experience by so-called home duties, and are refusing, in many cases, to enter an unprogressive employment whose ante-diluvian methods of work kill personality and efficiency at once.

Of course the question is infinitely more complicated than the above statement would imply, just as life is deeper than the outline drawings whereby we explain its forms. A psychological factor has helped to keep housekeeping a rudimentary social organ, and to prevent woman from escaping out of this atrophying business into any other. Nature combined with the selfishness of men in this regard. It is natural for a woman to be a mother, and she is willing to make a great many sacrifices to secure this end. But when at last she awakened to a recognition of the fact that her sacrifices were unfitting her for motherhood; when she saw that by remaining a household slave, chained forever to the unskilled work of a slave, she was thereby sacrificing her children as well as herself, then woman felt no longer her previous satisfaction in motherhood at all costs. She began to remember, like Ibsen's Nora, that first of all she was a human

being with the right and the duty of life. She perceived that to be fully human preceded all functions, however proper, which belong to a human being. "This business of motherhood can wait till I am fit for it," she thought. "First, I must breathe and move and think as becomes a woman and not a drudge. Drudge in mind and body? Drudge and mother? The terms are mutually exclusive! I will set about escaping drudgery."

Set about it she has and in deadly earnest. She has gone to work in industry where she expects to be treated as a twentieth-century individual. The domestic servant is withdrawing her protection against kitchen work. Woman forms trade unions and battles manfully for justice. She organizes women's clubs. She agitates for the ballot.

Not all of her methods are so praiseworthy. She escapes marital obligations by divorce. She avoids bearing children. She avoids marriage altogether, or, once married, manages her home so poorly that it might as well not exist: witness the mere fact that in New York City the largest percentage of undernourished school-children come from moderately well-to-do families[1]; and witness also the number of incorrigible children voluntarily

[1] Investigation by the Board of Health, 1907.

surrendered to our juvenile courts by respectable parents.

Thus the lack of progressive intelligence in homekeeping has had the twofold result of driving the woman out of the home in protest against its narrowness, and of frequently making the home and the family institution, as we know it, a failure. But if, as we hear nowadays *ad nauseam*, the family is the essential social unit; then it is not *against* marriage, not *against* that economic dependence of women which has been so cruelly exploited, that the fundamental reformer must struggle. Family life needs modernization. The present industrial employment and the continued unmarried state of so many women may be viewed as an unorganized strike against the injurious labor conditions in their proper trade. It is a necessary protest against wrong — but, a temporary condition which will pass away when right is once established.

The integrity of the family depends, first, upon modifying the form of the institution to allow woman human freedom, and, second, upon recognition of the fact that family life is a fit scene for the play of intelligence. Woman's education should be designed "not to lead her permanently away from the home, but to teach her

how to bring the best from the outside world into the home." The first step is the mechanical one — to bring homekeeping methods up to date, and so leave the mother a little leisure for life contacts.

Here is the mission of the domestic science courses for girls. Housework need be drudgery no longer when intelligence and system are introduced into it. The application of scientific study to domestic economy may perhaps do for the whole industry the same thing which science has done for every other line of modern business. Perhaps much of the purely mechanical work will be taken over by machinery or by special agencies. "Where one woman now uses a potato-parer, meat-grinder, bread-maker, biscuit-ringer, automatic cleaner, dish-washer or washing-machine, instead of the simple knives, choppers, breadboards, irons, brooms, pans, washboards, and human hands of our forefathers, every household will boast these conveniences and many another." Perhaps we may come to the conclusion that for a woman in every kitchen in every dwelling in every block in a city street to spend the same hour performing an operation, which one of them could perform for the whole block by means of a simple machine, is an unwarrantable waste of

time, strength, and mentality. The thought of a dozen women steaming and stewing over a dozen dinners which could, in many respects, be better cooked by one alone, may drive us to coöperative housekeeping of some hitherto unheard-of kind. One hesitates to predict what the future will bring forth in a field so hedged about with thorny prejudice and with real difficulties. But that some simplification of housework must take place is so certain that the particular form may safely be left for the specialist to discover.

Mere simplification is not enough: we must persuade woman that housekeeping is interesting. Women have been trying to escape from housework because they see in it no scope for the imagination. When the drudgery is obsolete and housekeeping is recognized and taught as a science, the four walls of a home will no longer be a prison for the ambitious wife, but a laboratory to which she brings for testing all the most progressive thought of the world.

It is not in the sphere of domestic economy alone that the trained woman will find room for deepest study. The education of her children can much less afford to be haphazard than the ordering of her kitchen. The illuminating distinction between efficiency and passive goodness is no-

where better shown than among mothers. How many little monsters grow up under the care of merely "good women"! How many weaklings! How many stunted natures! When Hamlet asks the prying emissaries of his uncle to play upon a recorder, Guildenstern replies, "Believe me, I cannot. I know no touch of it, my lord. I have not the skill."

Then Hamlet: "Why, look you now, how unworthy a thing you make of me! You would play upon me, you would seem to know my stops, you would pluck out the heart of my mystery, you would sound me from my lowest note to the top of my compass; and there is much music, excellent voice, in this little organ, yet cannot you make it speak! 'Sblood! do you think that I am easier to be played on than a pipe?"

No one would dream of trying so simple a thing as piano playing without practice, but to nourish costly human bodies, to build a precious human life — for this, instinct must suffice. Mother love may be omnipotent in romantic fiction, but it will never tell the ignorant woman to scald her baby's milk bottle unless she knows the dangers of unscalded bottles; and all the fondness in the world, and even all the old-fashioned skill at making individual dishes, will not tell her how

to set a nourishing meal before her children unless she knows something of the ingredients of food and the chemical needs of the body. If a teacher must study for years to instruct the child an hour a day in some limited subject, how much more careful training must the person require who is to control the child during its earliest and most formative years, give it character, and mold its whole attitude toward life? The realms of psychology, philosophy, history, literature, biology, and hygiene must be exhausted to give the growing child his due. No mere grown-up knowledge of these subjects will suffice. The principles of child growth and of child pyschology must be conned by the mother no less carefully than by the teacher. She must know the material with which she works; know its laws. She must be an expert, for no race was ever greater than its mothers.

New York City has at length discovered that more than love is needed in rearing children, and has not only instituted courses for young mothers, but sends a nurse into tenement houses, where a new baby has come, to instruct the mother by word and example as to its proper care. Would it not save public expense as well as babies to give this training earlier and to every

woman? I know it is the practice in some circles to scoff at mothers' classes and mothers' clubs. Like alchemists of old before science reached a solid basis, many members of mothers' clubs try not a few ludicrous and fantastic experiments. But the greenness of their wisdom is not the important thing. It is a hopeful sign that they have begun to think about the question at all.

You mother who never punished your child unjustly in anger and so undermined his respect for your judgment and authority — I do not write for you. You other mother who never humored the baby at your breast and lost him forever, or during years of bitter struggle, that great gift of self-control, you too have, perhaps, been intelligent without set instruction in the mysteries of human growth. But how many of us are intelligent? Do not think of yourself, O reader who were born wise! but of Mrs. X, who has just left the room, and who, we all know, was born foolish and yet accepts with easy-going complacency the responsibility of children up to any number the "Lord may provide."

Are the domestic science and motherhood courses the only trade instruction desirable for girls? What will be the effect on them of business and industrial training? Will this tend

merely to increase the army of single women, to entrench woman more firmly in every form of industry and make her so contented in her self-supporting existence that she will be slow to exchange her freedom for the necessary dependence and limitations of a child-bearing woman? The answer is yes and no! Fortunately the author has no wish to dogmatize as to particular methods in a case where so little experimentation has been done. It is possible that the practice of housekeeping will so evolve that all women need not cook and sew just because they are women. This question of the woman in industry is a difficulty which must be frankly acknowledged. It is well that women are able to support themselves. Many a rash marriage, many an uncongenial one is prevented by the independence with which a wage-earning woman can await her happiness. Women also find in pre-marital years of wage-earning, a disciplinary training in orderly, methodical habits which is invaluable to a future wife and mother whose autocratic position in the household might tempt her to unsystematic work. "It is noticeable," says Helen Bosanquet,[1] "that girls who are engaged in skilled industries are better fitted for their home duties afterwards

[1] Helen Bosanquet, *The Family*.

than girls engaged in rough and unskilled work." And surely better fitted than untrained girls previously occupied at nothing!

Yet the hard-headed man sometimes objects that a program for thorough trade education may suit boys, who are a stable industrial factor, but that it is useless to teach a girl her whole trade, because she so seldom needs it. The question is more than economic; such instruction trains her mind to unified thinking — a habit surely priceless whether the concrete problems of her trade are of further use to her or not.

Viewed, however, from the economic side, the question of the woman in industry is seen to be more than training for a brief business career to be terminated by marriage. It is roughly estimated that at least fifty per cent of women workers are over twenty-five years of age. This indicates five to ten years previously spent in wage-earning, and suggests that no small proportion of this fifty per cent will continue indefinitely self-supporting. For these women life presents a masculine problem, and the trades upon which their future safety and comfort depend must be taught well at all hazards, even if time forces the sacrifice of strictly feminine branches. Better do well one thing and that the most ur-

gent, than half perform two tasks, however important the second may appear. The principles laid down in this chapter stand as our ideal; but education, like politics, must be wisely opportunist. We cannot deny the fact that many women are engaged not in their natural trade, but in a multitude of industrial and mercantile pursuits; and common sense demands that schooling should prepare them unequivocally for what they do instead of for what some one may think they ought to do.

Even the girl to whom industry is but a temporary means of livelihood presents a more complicated problem than that of her own personal welfare. From the Kansas City *Labor Herald* we quote a union man's opinion that, "When we consider the fact that the average time worked by a woman or girl is computed as five years, it is easy to see that a long apprenticeship cannot be served, and any school training which will assist her to earlier efficiency must be favorably received by us." May not the industrial transient be worth training for the sake of those with whose wages she competes? Not industry alone would profit by the greater capacity of its women workers which would follow the opening of trade schools for girls. Every worker, man or woman,

would profit thereby, for at present the most ruinous competition with which skilled labor meets is the cheap unskilled labor of women. Because they are untrained, women can command only the lowest wages; because they are untrained, they fall quickly into cheap specialties and do not raise their wages; because they are untrained in mind as well as in hand, their trade union organizations are not usually compact enough for power; and because they often take a temporizing view of labor, which no instruction overcomes by interest in the thing itself, they care little about self-improvement and are so uncertain a factor in industry that their lower wage is explained if not excused from the employer's point of view.

From whatever standpoint we survey the matter, it presents one unchanging aspect. That women are in industry to stay—as a class if not as individuals—seems an established fact. And so long as they are in industry, they deserve as adequate training for their tasks as men.

Two other arguments for vocational training of women (whether domestic or industrial) force themselves upon our notice. As has been said in another connection, trade schools ought to secure a respectful attitude toward work. If more of our young women took some personal interest in

housework; if more of them were trained to manage a house economically and even to do the work well and expeditiously themselves, they would be willing and able to marry on less and begin more simply than many a young person now thinks of doing in some walks of life. Thus perhaps some of the justly deplored late marriages, with their correspondingly decreased birth rate, might be avoided. Our ethical concept has in this case gone in advance of the biological evolution. We must not try to force it too far ahead, or nature will pull us up short rein by some signal warning.

The problem of late marriage is bound up closely with a still graver question upon which trade education should have an even deeper and better influence — that travesty of marriage, prostitution. Prostitution is a survival of primitive polygamy and later concubinage, monogamy as a type having been slow of development, being still, indeed, far from perfectly developed in human ideals and conduct. And modern social organization impedes its development in many ways; nay, almost inevitably prolongs the barbaric system amongst us.

How?

Prostitutes may be classified as: (1) Naturally depraved; (2) girls who have been betrayed and

left helpless; (3) girls who have a strong distaste for work; (4) girls who, through inefficiency or underpay, cannot earn by legitimate means enough to live. The last groups are larger than one likes to think, because their sin is so manifestly the fault of the society which has allowed them to grow up untrained in the matters whereon their life and safety depend, and which purchases its luxuries a little cheaper by the sacrifice of some underpaid sales-clerk, sewing-woman, or factory girl.

Before these unfortunates have drifted to wreck on the shores of our city life, the trade school will come to their aid. The indolent girl who despises labor will there learn that work is honorable, and will conceive an intelligent interest in some worthy pursuit. The inefficient girl may acquire industrious, regular habits and become able to earn her livelihood. If she has an excitable, unsteady temperament, application to practical work should give her better poise and at least some permanent interest to counterbalance her fever for excitement. It is the old question of prevention or cure; trade or reform schools. The young learner would find her dangerous period of almost unremunerative apprenticeship materially shortened by attendance upon a trade continuation school, because, when working and

studying simultaneously, she could forge ahead more rapidly toward the point where earnings and expenditures balance. For the woman who is so underpaid that she cannot live or cannot dress in accordance with the requirements of her trade, or whose average salary gives her no chance for the recreation and pleasure which a healthy nature craves, there are only two lines of hope: self-help through trade union organization, and public opinion which shall refuse to patronize business concerns that underpay their women. For trade union action, intelligent workers are required. We have, alas! no quicker nostrum for the creation of that social sense in which all prostitutes will find their chief salvation than slow education of the public to a better understanding of the dangers and terrors of this evil which menaces not merely the health, happiness, and morality of a fraction of our women, but the whole future stamina of our race. But we maintain that, in the present state of chaos and difficulty, the Vocational School will be a great help and a powerful deterrent for the girl whom unguided circumstance now throws into the undertow of civilization, since it will give every girl an honorable pride in independence and the ability to keep herself independent.

VI

IN THE COUNTRY

"Agriculture underlies all industries and draws upon all sciences." — WICKSON.[1]

IN the preceding chapters we have spoken of the seven million or more persons who are engaged in American industry. There is an even larger class for whom the vocational school would be invaluable — the farmers. One third of our population still lives upon the land; and many more than the ten and a half million agricultural workers enumerated by the last census can and will sooner or later turn to the country for support.

But in spite of this preponderance of rural population, our civilization is distinctly metropolitan. The current of modern improvement has served to draw country districts nearer and nearer the city. The city, on the other hand, overflows its suburbs and covers the country with a thin metropolitan veneer. This is inimical to the growth of a healthy country life rooted in

[1] Mr. Wickson in *Cyclopedia of American Agriculture.*

the soil and drawing therefrom spirit and sustenance, for, in fact as in fiction, there is a genuine pastoral element, which has its own laws of development, and which is too precious to smother under any city-made mantle of progress.

The disappointing inapplicability of our long cherished idyllic theory of country life to the bare, hard round of drudgery which its reality discloses, has helped to retard our appreciation of this element. Probably there is no more fruitful field for social work than the village, particularly the old established village. The human stock needs replenishing. Existence is stagnation. There is no society — how can there be where there is no continual supply of fresh interests to interchange? — and since the schooling of the average country child stops early, he never acquires those inward resources which solitude demands. Owing also to this lack of education, country districts resent innovation, and are slow to improve their methods of work and conditions of living.

The youth and energy of the country has found the path of least resistance to be quitting rather than reconstructing country life. Thus we have seen in the last fifty years an exodus

cityward, and westward, which has produced the twofold result of city congestion and under-development of rural resources. This exodus has been stimulated by educational ideals as well as by economic pressure. Little has been done by the schools to make farming seem an opportunity for ambition and talent. Few educational and cultural advantages have been available for the farmer, whereas the city is in itself a liberal education. The largeness of urban life has seemed intimately bound up with its superior business opportunities. The introduction of farm machinery, and the factory production of much which was formerly made in the household, has greatly reduced the demand for country labor; hired help find their uncertain and at best unsteady employment more and more unsatisfactory and are easily tempted to the comparatively sure and continuous work of industry. Because of discriminative transportation rates to larger centers, industry has left the small towns, removing not only the demand for workmen, but also the market for farm products, to the distant city. With this decline in the home market, the less desirable land can no longer compete with fertile regions, and many farms in New England, New York, and even Ohio, have been aban-

doned. The farmer has either gone to the city, or pushed westward where land is new, cheap, and more plentiful, and intensive methods are not yet necessary in order to produce a crop. But now that our new territory is taken up, while at the same time our population steadily increases and a larger food supply is daily becoming necessary, we must expect a change. Much abandoned land will again be brought under cultivation, much exhausted land will be reënriched, and more careful, scientific agriculture will develop.

Education is already paving the way to the reconstruction of farming methods, but education has as yet touched only the overseer, the gentleman farmer. As Dean David Kinley puts it, education is lifting farming from the grade of manual labor to that of a technical calling or profession. Schools of agriculture are gradually raising their standards of admission until academically they stand or expect to stand on the same level with engineering colleges. With such institutions this discussion is not concerned. We stand for the plain man; the average workman, the average small farmer or even farm hand. He too needs training if agriculture is to form a trustworthy substructure for our industrial civilization.

Neglecting to train our farmers means as basic and certain a destruction of natural resources and reduction of national prosperity as the demolition of every forest. The soil is our fundamental support. We are its creatures; our factories are busy with its products; indeed, human life is little more than shaping what the soil supplies us in a formless state. Who is the keeper of this life-giving mother earth? The farmer. And what have we done to make sure that he will not kill the goose that lays our golden egg? We have a habit of educating those who perform the secondary human functions; but the vital primary ones are left entirely to untutored impulse.

The nature of farm work renders special training for it imperative. Though the division between labor and capital is at length asserting itself in this field, the farmer's work is usually self-directed and unspecialized. Upon one man depends the success of many acres. He must understand trade upon trade, drawing from all the sciences alike, sending out ramifications into every department of knowledge. An acquaintance with local soil and climate and their bearing on crop raising; with the chemistry of soil and crops; with ways of preventing depletion of the soil through exhaus-

tion and erosion; with the principles of drainage and irrigation, and of animal and plant physiology, care and breeding; with the pests and diseases which attack vegetation and the methods of fighting them, — these are but a few things upon which the successful farmer or even intelligent farm worker can scarcely afford to be ignorant. Yet all of these are topics for which widely diversified instruction is necessary, topics whose frontier of knowledge is rapidly advancing and for which no hereditary or legendary information can suffice. Finally, successful farming demands a far-seeing and daring mind. The saving from a larger outlay which may increase the net profits in far greater proportion is a subject upon which the untrained rustic is hard to convince. Perhaps even more difficult to understand is the point where the law of diminishing returns becomes operative, the point beyond which intensive methods do not bring a paying return.

"The increasing capitalization of agriculture necessary to secure the greatest long-run profits is putting agriculture more and more into the hands of educated men of means. Capitalization always places a premium upon intelligence," is the dictum of Dean Davenport. Unless we educate all farmers instead of merely those gentle-

men farmers who find their way to our colleges and universities, the inevitable development we have already witnessed in industry may also be expected in farming; and we may anticipate a twentieth-century feudalism in land ownership and the rise of an agrarian proletariat. In manipulating this proletarian labor, those same problems which now obtrude themselves in connection with unskilled industrial labor may be expected to present themselves.

That we may forestall such a consummation; that we may never come to carry such a burden of agrarian as of industrial incompetence; that the national farming resources may be most fully and conservatively developed; and that the extravagant exhaustion of our fertile soil by unenlightened cultivation may no longer continue, the United States needs some systematic agricultural education which shall reach every rural inhabitant.

It is difficult to determine what form of agricultural training should be introduced into country schools, but certain principles to govern such instruction may safely be predicated. Professor Earle Barnes makes a suggestive distinction between educative and uneducative work. "Work ceases to be educative when we have mastered

it completely, when its processes have become purely reflex and it ceases to engage our thought." It is not alone mechanical work, such as that of the ticket chopper, which soon loses all educative value. Any task in which the worker does not continually find new outlooks widening before him, in which he does not every day readjust his mental viewpoint to meet some new contingency, in which (to borrow from nature an expression of the perfect adaptation to environment which precludes further progress) he vegetates — any such task is not merely uneducative but stultifying as well. Work may become uneducative without being thoroughly mastered if its thought possibilities are undeveloped by the worker; and it is just here that the country schools must strive for the uplift of rural intelligence. The "hay-seed" is not a hay-seed because he comes from the country, but because humanly, intellectually, he has vegetated and gone to seed.

To open up to the farm population the cultural value of their work is the first object of the country school; and this can be done only by giving rural education a new direction and altering its ideal. The same subjects may be taught, but they will be taught in terms of the country.

The grammar grades should most emphatically not attempt to give training in general farming methods or in agricultural theory. Children are interested in concrete vital phenomena, not in laws, and nature study should be used to excite the intelligent interest of the pupils in the life about them. But the manual training for these elementary grades might have a local and practical bearing. In place of the purely formal exercises so common in schoolrooms, the class might draw subject-matter from practical problems of the farm, and build fences, drains, and roadways instead of constructing useless wood, paper, or metal objects. The school-garden is an infinite resource; and could be made practical by selecting for successive years the different crops suitable to the locality.

In addition to freshening the grammar grades in country schools with a breath of the woods and hills, and with the scent of good red earth; in addition to turning the child's mind toward the beauty and wonder of the natural world, we must also give him special training for his life work. This will begin in the high school.

This school must of course offer general academic branches, as these are the prerequisites of farming intelligence. But in addition to this

general information and mental drill, the agricultural problems of the locality should be covered. As Liberty Hyde Bailey justly declares, the country high school must not attempt to do superficially what the college does exhaustively. Let it eschew broad and theoretic surveys and do thorough work on definite, significant local problems.

In both grammar and high schools, also, various academic branches can be given a distinctly vocational turn without detracting from their value as mind trainers or sources of information. Geography, like charity, may well begin at home; the farm, village, township, county, state, nation, and continent seems a logical order of study. Map drawing would in this way assume a wonderful vitality by having a basis in visible things. In geography, as it is often taught, we see the grown-up impulse to present a subject analytically, symmetrically. But the natural progress of child thought is from the known to the unknown. Comprehensive unity the child cannot appreciate; but coherence of the new with the familiar is needed to maintain interest. Arithmetic can easily deal with farm problems. Choice of reading, too, is a fruitful field. Why should not the English course include books which

bring out the wealth of rural life? — not books that sentimentalize over the country; pupils will be quick to detect the false and artificial note, — but those which impart a new and deeper meaning to nature, which open up rural opportunities heretofore undreamed of, and give an impulse toward creative thinking about his environment that will endure beyond school years and make the farmer's life a growth and a continual education.

The movement for better rural education is already widespread. Practically every state in the Union has farmers' institutes designed to arouse interest in scientific agriculture and to popularize scientific treatment of especially important farm problems. The National Department of Agriculture and many state departments are unflagging in disseminating literature and giving consultation. Experiment stations have given incalculable stimulus to up-to-date farming in adjoining districts. Colleges of agriculture are everywhere enlarging their extension work to include lectures on agriculture, traveling schools, and one, two, and three week courses held either at the college or throughout the state. Minnesota, Arkansas, Massachusetts, Oklahoma, Wisconsin, Alabama, Georgia, and New York have

promising systems of so-called agricultural schools of the high school type, and in many other states agricultural courses have been added to the curricula of existing high schools. An extensive effort is being made to equip elementary school-teachers for presenting agricultural subjects. In thirteen states, teaching of agriculture in rural schools is required by law, while in thirty-one it is encouraged. Gardening is becoming a feature in many progressive schools, and, though the experiment is limited in extent, it is unlimited in results, as is proved by the social and moral effect of the gardens in De Witt Clinton Park, New York, in Weccacoe Square, Philadelphia, and in Dayton, Ohio. It is a curious fact, however, that school-gardening has been largely confined to city schools and betterment agencies, and that its educational and practical value in rural communities has been little recognized. Where gardening is not done in connection with school-work, home gardening for boys and girls is widely encouraged by the competitive corn and tomato clubs. The general interest in nature study, which even extravagant faddists have not been able to discredit, is our longest step forward in the way of better rural schooling, because it means a transforming of the

spirit and a redirecting of the method of education.

Marvelous and inspiring as are the strides which the movement for agricultural education has made and is making in the United States, we must not allow them to blind us to the fact that, after all, we do not insure to every farmer adequate preparation for his work. The special college of agriculture is out of the question for the average country boy. Little use is made of rural common schools as training for farm life and the agricultural high school is still a rarity. "Probably not one farmer in twenty-five ever attends a farmers' institute."[1] A somewhat larger fraction, but still a fraction, read intelligently the government bulletins. The short courses and special lectures offered by institutes and colleges are not and cannot be a systematic preparation for agriculture. They merely solve the concrete difficulties of farming for the person who has already encountered them in practice. The fundamental, thorough, and comprehensive system which shall give us a competent rural population has not yet been evolved. Yet this preliminary agitational work is an invaluable test of the feasibility of scientific agricultural train-

[1] *Report of U. S. Bureau of Education*, 1909, chap. XI.

ing, prepares the public mind for the adoption of an adequate system, and should determine the exact form to be assumed by such a system. We are, so to speak, breaking up and preparing the soil for the new educational crop.

Other countries have gone further than we in the matter. France has established schools of agriculture in every province, schools which have encountered a great deal of local prejudice, but which are raising French farming to a higher level of efficiency. Belgium has followed and improved upon French example. The name of Switzerland is synonymous with scientific agriculture; and while an American is poor on five acres a German would be independent. The disparity cannot be explained away by the different standards of living. It is partly traceable to the new effort on the part of German, and notably Prussian organizations, to educate the farmer for his vocation. Austria has over one hundred and ninety-five schools in which agricultural subjects are taught. Holland and Denmark show an equally advanced attitude toward agricultural training, and in the British Isles, the movement is gaining ground. In England and Wales, itinerant lecturers under the auspices of the county councils go out from the university or agricultural

college center to give instruction to local classes extending over several weeks. Special problems, such as milk handling, are discussed throughout one course. These instructors also supervise the work done in local agricultural continuation courses, night classes, and popular lectures, and they advise about the management of the gardens which are becoming a more and more common feature of English country schools.

Canada uses the school-garden to good effect. Her rural schools have regular courses in agriculture supplemented by work on an experiment farm. The advantages of rotating crops, of fertilization, of proper choice and care of seed are illustrated in the most conclusive manner by maintaining two sets of fields for every point to be proved. In one field crops are rotated during a certain term of years, while that adjoining is planted year after year to the same crop and soil exhaustion becomes evident in the inferiority of its yields. One crop is adequately fertilized; the adjoining one is not; and the pupil has ocular proof of what increase in net profit the greater outlay has produced. One field will be sowed with new, selected, fumigated seed; the adjoining one with old seed. This system is revolutionizing Canadian farming, and is making of our

sister republic on the north a dangerous potential competitor for future American food markets.

The question of agricultural education is, however, in the last analysis more than economic. We need it not so much that we may raise more corn and wine, but that we may raise better men and women in our country districts. Any work is to be judged rather by the human being it develops than by its material output. And the *human* resources of country life, we have as yet neglected. Our rural populations are not rooted to the soil. The country road which passes by the author's ancestral home shows scarce a family which has lived more than twenty years upon the land. Most of the places have changed hands within the past ten years. New names, new faces — a continual flux! And what of the neighborhood which for a century has not outgrown this fluid transitional stage? Barren of association, barren of traditional ideals, what formative influence can it exert upon the character of its people? What love or respect can they have for its beauties? What intelligent policy of conservation can this shifting population maintain? The land is harried by a succession of transient farmers; its woods are leveled; its hills unveiled. Their past

is dead; their future, a matter of indifference. The farmer's sole thought is to get all he can at any cost; he, too, will soon move on.

The life of such a place is raw and tasteless; it lacks the mellow savor of a community which has been a slow accretion of all that was best and most enduring in many decades of human growth. It lacks social solidarity; it lacks standards. Its language has no earthy tang; its bad grammar never rises to the dignity of dialect. Perhaps such a neighborhood escapes the stagnation of the isolated village where a static inbred population is year by year deteriorating; but it represents an equally undesirable extreme. Between the two there lies the mean of true agrarian self-realization.

Education for the farmer must not lead him away from the farm, but teach him to bring the best from the outside world into farm life. Perhaps then we may hold our population generation after generation on the ancestral acres, and produce that solidity of race, that richness of association and legend which make for the beauty of some European countries and give the life of the people that perspective which Hawthorne has said is necessary to the production of a national literature.

VII

TRADE EDUCATION AND ORGANIZED LABOR

NOTWITHSTANDING reports to the contrary, organized labor favors trade education. At the Washington Conference of Labor Leaders, it was resolved that industrial training, beginning in the higher grammar grades, should become a part of the public school system, and that school attendance up to the age of sixteen years should be made compulsory. The meeting of the Federation of Labor at Toronto reinforced the Washington resolution. It may be objected that the Federation is more conservative than the average trade union, and hence, though officially labor's organ, not really representative of union sentiment. The precise weight of this objection can be measured by the results of a canvass of New York State unions. Out of twenty-four hundred and fifty organizations, fifteen hundred favored preparatory trade schools for children from fourteen to sixteen; and twelve hundred and thirty-two of these also favored special trade schools for boys from sixteen to eighteen years of age.

Nevertheless we often hear that trade unions oppose any extension of apprenticeship and are much more hostile to free trade education. That they have sometimes looked with disfavor upon potential competitors, in the fear that they will depress the union wage, is undoubtedly true; and certain labor organizations have adopted a medieval policy of limited apprenticeship recalling that which formerly undermined the usefulness of guilds. The wronged person is rarely wise in his first efforts at redress. This restriction upon apprenticeship is not, however, nearly so important or so sweeping as is popularly supposed. Ralph Albertson, of Filene's department store, Boston, states that no trade union restricts the number of apprentices to less than seven per cent of the adult workers and that twenty per cent is the usual union regulation; whereas the actual numbers employed in the best trades still left for apprentices are: 5.86 per cent in machine trades, 5.70 per cent in plumbing, and 1.3 per cent in the building trades. While the danger of overproduction is as real in the labor market as in that of manufacture, experience has taught that in both it is subject to rational control, and the antagonism to more thorough methods of apprenticeship comes from a decreasing number of unintelligent laborers

whose sense of grievance is real and poignant, but whose rudimentary vision of cause and effect is still blinded by resentment.

From a Middle Western labor council comes a liberal statement upon this most mooted point in all union discussions of industrial education. Supplemental trade schools "have proved a great benefit to apprentices who may, by the limits of the shop they are working in, or from other causes, be denied the advantage of getting into close contact with all the branches of their work; and as a preliminary training they would give the prospective mechanic such a grounding in his elementary work that it would seem advisable to allow all or part of the time spent in the school to count on his apprenticeship term."

The process by which this decision was reached reveals the real attitude of the average union man. Believing that union labor has a valuable contribution to offer the projector of a program for industrial training, and hoping to create a new block of active public opinion in favor of such training in Kansas City, the author sent questionnaires to every trade union in the city and asked the Industrial Council to take a definite stand upon the matter. The first response from many of the locals was a suspicious negation due to ignorance.

Letters arguing *pro* and *con* poured into the author's mail — the hottest negatives often furnishing factual evidence in favor of trade schooling. Discussion in the Industrial Council was warm and marked, not by opposition to vocational training, but by fear of "some nigger in the wood pile." Finally the Council appointed a committee to study the subject in detail and report its progress at successive meetings. The result of this study is indicated above, and probably represents the attitude not merely of labor leaders, but of unionists who have given the subject thoughtful consideration. The committee further recommended that the Industrial Council urge the establishment of part-time trade schools, "provided the trade instructors were chosen from the best men now at work in industry and provided the Council were given some share in shaping the general policy of the schools." The original hesitancy of the unions is thus seen to have been commendable fear of indorsing an ill-defined program, a fear that vanished before a clear-cut plan with measurable consequences.

Great difficulties undoubtedly present themselves in grounding vocational schools. The training must fit the needs of the region or it will merely graduate candidates for unemployment.

Suppose the industry of a region changes. Can the school follow quickly enough? Suppose new methods of manufacture are introduced. Can the school afford to scrap at once its out-of-date but expensive machinery as a factory would do and thus keep pace with business development? How to divide pupils among the different branches; how to prevent overcrowding with its subsequent oversupply of pupils from popular classes; how to guard against the subtle temptation to overemphasis offered to the principal by iron and wood industries which lend themselves well to classroom work; how, in short, to articulate the school and the industry so closely that no superfluous worker will be produced — these are all questions indicative of grave dangers, dangers which make the labor union justly oppose, not the trade school ideal, but certain types of trade school which involve them. This is the reason why French workingmen's organizations have shown real hostility to vocational schools whose enrollment is independent of the need for new workers in industry. This is also the reason why our own labor unions look askance at really effective trade courses which rotate apprentices weekly between school and factory. Such an arrangement as the Fitchburg, Massachusetts plan, with its alternate weeks of

classroom study and actual wage-earning, means at bottom that twice as many workers are being trained as can be ultimately utilized. Against such playing into the hands of the employer, labor naturally protests.

But over against these dangers stands the fact that it is not skilled but unskilled labor which menaces the union wage. "We have too many untrained boys already in our trade," writes many a union secretary. Though it be true that many industries must have unskilled helpers, we need not acquiesce, nor will the union man, awake to the true interest of his class, acquiesce in the plea that because there is a certain amount of unskilled work to be done, a whole section of humanity must forever be kept ignorant in order to perform it. Such inferior positions may well be held temporarily by beginners in industry who, later, will pass to higher tasks and make room at the bottom of the ladder for new aspirants. Furthermore, as far as the eye of the present can reach, men will always be unequally able to profit by instruction and the less apt must content themselves with comparatively unskilled work. The trade school gives every man a chance to make the most of himself, but does not, cannot warrant that the "mosts" will be alike.

Another trouble, which is sure to arise in the course of effective trade school management, is that unions oppose the sale of school products. The words "institution-made goods" are familiar to all who have followed the course of prison reform and have noted the untimely check which, because of an unlucky complication of issues,[1] progressive methods in penitentiaries have often met at the hands of manufacturers and unionists alike. That the goods are made in an institution is not the union objection, but that they sometimes sell at a price which cannot cover a living wage for independent workmen in competing factories. When a fall in market prices and subsequent reduction in wages seems imminent, prison goods are compelled by law to retire from the field, and many criminals fall idle in confinement or are occupied at trades which can be of little service to them after discharge. Although the temptation partly to recoup the public treasury for an outlay quite independent of sales is easy to understand, there is no reason why prison goods should be marketed so far below the real cost of production; and an enlightened opinion will repair this blundering action

[1] Such as the related but entirely separate question of leasing convict labor to private contractors.

and attack the real crux of the matter, regulation of prices. The question of school-made goods is susceptible of the same sort of regulation. It is obviously undesirable for a school to become a money-making institution; speed and economy would soon usurp the place of careful education. But there is no reason why the prices of school-made goods should not follow the market, since no private profit impels to underselling the legitimate producer.

It was not, however, because there were no well-grounded arguments against it that the American Federation of Labor declared in favor of public vocational instruction. These hard-handed men recognized that labor would benefit thereby, not only in myriad indirect reactions upon the laboring man and his living conditions, but directly in a higher wage. That competence is better paid than incompetence is self-evident, and the proof which, in economics, even an axiom seems to require is furnished by comparison of the wages of trade school graduates and ordinary apprentices. The Massachusetts Commission on Industrial and Technical Training publish the following table based upon a study of two thousand wage-earners in Massachusetts: —

Age	Wages per week of mere apprentice	Wages per week of Trade School Graduate
14	$ 4.00	—
15	4.50	—
16	5.00	—
17	6.00	—
18	7.00	$10.00
19	8.50	11.75
20	9.50	15.00
21	9.50	16.00
22	11.50	20.00
23	11.75	21.00
24	12.00	23.00
25	12.75	31.00

The depressing effect on wages in industry of the low rates due to overcrowding in non-industrial lines, particularly clerical, would be in some measure counteracted by attracting into trade those very competitors before whom some short-sighted union men tremble, but who might perform the additional service of superseding the cheaper labor of the immigrants who menace American standards in many vocations and present a problem with which unions cope valiantly but ineffectually.

A less obvious feature of the effect on wages of better trade instruction is its bearing on inter-

national competition. Unless the American laborer wishes to be superseded on his own soil by the output of some clever toiler across the sea, he must be cleverer than his distant rival. But until he has as good a training as is given to workmen abroad, he will be no more certain of his job than if that foreigner were standing at his elbow asking for it.

If the future of labor is to lie in the hands of labor, then labor must be wise. When the working man can afford to remain longer in school, he will learn to use his head as well as his hands, and the union needs heads fully as much as hands. At present, half its strength goes to self-education. To raise the standard of living of its members, to teach workers the value of their labor, to open their eyes to what constitutes decent conditions of work and pay, to arouse them to the need for organization, and to drill them in effective methods of coöperation are the prime tasks which confront the labor union, and especially the labor union in immigrant neighborhoods. The real champion of Americanism is the American laborer; and in fortifying American standards, the struggle of the union will find its strongest support in the trade school.

Not only higher standards, but the thought

power which breeds sane and rational methods of accomplishing them, will be the property of a better educated working public. With training in history and civics and hygiene comes a widening of outlook which will elevate union effort from the level of self-seeking to that of civic enterprise. Let the rank and file come into the organization equipped, not only with the information necessary to secure their own advancement, but with some knowledge of the place of that advancement in the social and industrial whole, and the union will prove an invincible force both for workingmen's betterment and for public welfare.

VIII

TRADE EDUCATION AND SOCIALISM

SOCIALISM is a philosophy of intelligence.

It is *not* a leveling down of society. It is *not* absolute communism. It is *not* a scheme of spoliation devised by the "have nots" to enrich themselves at the expense of the "haves." It is *not* a system of governmental paternalism and individual inertia. Its ideal is *not* drab uniformity.

Benjamin Franklin once said of a plan, whose adoption he had unsuccessfully defended, that the extreme diversity and contradictoriness of the arguments urged against it proved to him the soundness of his proposition. The socialist might lay the same flattering unction to his soul, as attacks against his theory of life are so opposite in nature as to refute each other. This is due to a general misconception of what his theory is.

Some one has jestingly remarked that every thinking man is a socialist, whether he knows it or not. In a measure this is true, for every thinking man believes in equal opportunity for all: not in equality — but in opportunity to make the most of those diverse, unequal abilities latent

within us. What philosophy calls self-realization is the socialist's ideal. Nothing could be more inimical to self-realization than the perfect uniformity of communism or the absolute license of nihilism. Socialism would proceed by another road. Man in society must at the same time be free to grow up to his individual limits.

That he is not at present free to do so is the socialist's contention. Private ownership of capital in land and in the instruments of production has given certain individuals power to determine the living conditions of great masses of people; and the competitive organization of business has forced them into using this power to grind down the working public to a level where real living is impossible. Socialism would transfer from private hands to the general public the ownership of such capital. This, according to John Spargo,[1] does not mean entire abolition of property lines. Only as private property gives control over human life, or reaps social values, is it a menace. Monopolies belong to the public: small independent industries might well be left to private initiative subject to governmental regulation.

Some persons, indeed some socialists, see in

[1] John Spargo, exponent of American socialism, in an address at Vassar College, 1907.

socialism a purely proletarian movement. This is a narrow view. Socialism is not a class philosophy, but a universal philosophy. Matthew Arnold, the apostle of culture, pleads that our inequality "materializes our upper class, vulgarizes our middle class, and brutalizes our lower class," and it is for the sake of all humanity that the socialist desires the abolition of private profit which, he maintains, robs master and servant alike. Society will be far richer when the lives now blighted by adverse economic environment reach full fruition of their powers.

With the case for or against socialism we are not here and now concerned, but the bearing of this most significant of contemporary propaganda upon the question of industrial education cannot be ignored. We are tending toward a more and more socialistic form of society. The fact that the party polls every year a larger and larger vote is the most negligible proof that this is true. Socialism's gains have come in the main through agents without the ranks. The concentration of capital we have witnessed in the United States during the last quarter of a century has paved the way to a socialization of commerce and industry which is already taking place. Governmental supervision is a pseudo-ownership, examples of

which confront us on every hand. Once the responsibility of the state in this regard is established, real ownership will follow where regulation proves inadequate. Natural resources are thus more and more appropriated by the state. Municipalites are managing their public utilities. Plank after plank in the socialistic program has found its way into German, English, and American legislation in the shape of extended suffrage, initiative and referendum, employer's liability laws, old age pensions, accident and sick insurance. Even in our homes we feel the socialization of living. Not only are we dependent upon the outer world for our supplies, but milk inspectors, pure food laws, building regulations, and health boards attest social responsibility for individual welfare.

All this means an increasingly complicated system of government requiring greater efficiency on the part of officials, and greater and greater civic spirit and intelligence in the citizens who elect and censor them. How well is a republic, where less than one fourth of the voters ever pass beyond the fifth or sixth grade in grammar school, prepared to solve these vast and delicate governmental problems? The socialistic state requires high-grade citizenship. It requires a think-

ing and an acting public; and especially does it demand that the public should think and act along the lines in which vocational schools should train their pupils.

The crux of socialism is of course economic. The socialist must understand industry in order to realize his ideal without injustice: not merely that particular little industrial pigeonhole in which he finds his daily bread, but the whole trade situation. Specialization has multiplied class antagonisms, and just so long as we have an unintelligent working population whose vision is bounded by the special process at which they toil, who do not understand the work and function of all factors of production and distribution, so long shall we have irrational demands from labor and irrational outbreaks; so long shall we have an ever-growing mass of workers given over to an abortive, half-baked socialism, which comes to little more than nihilism, violence and damaging of property in the end. When, however, as Mr. Spargo points out, discontented persons are wise and educated enough to see their position in its historical perspective, there is no class hatred for the capitalist on the part of the worker. Then he judges institutions and not men; and would introduce his reforms through legislation fair to

laborer and capitalist alike. Labor has a voting majority, and the only safe thing for capital is to educate labor broadly and thoroughly.

It is not alone in realizing the socialistic ideal that intelligent citizenship is imperative. If labor is to own capital and conduct industry, it will be necessary that the workers understand the whole process of manufacture and marketing. Can the academic high school or even industry itself teach them this? And when government officials are managing directors of commercial enterprises, the stockholding voter must keep a watchful and seeing eye upon the administration of the public's business. "There is no such thing as an automatic democracy: the price of liberty will always be eternal vigilance."[1]

If we ever have a socialistic state, progress will no longer be stimulated by desire for private gain. In place of love of profit must come love of perfection and the intelligence which sees beyond personal concern to the general good. Can six years in grammar school inculcate this?

The socialists themselves are the first to recognize that the corner stone in their edifice is education. "Anything which raises the standard of life, morality, and mentality of the workers,

[1] Spargo: *Socialism.*

makes them increasingly fit to assume complete control over industry," says Robert Hunter.[1] That vocational training is the surest means to this end was the thought of the Radical Republican and Socialist Congress at Dijon when it declared in favor of obligatory industrial education.

[1] Robert Hunter, *Socialists at Work.*

IX

FOREIGN TRADE SCHOOLS

IT is not enough to believe in the efficacy of trade education. Faith may suffice for religion, that glorious realm of the still unrealized ideal; but in practical affairs, we demand sight, proof, fact. Therefore the advocate of industrial training turns to actual working examples, namely, the trade schools of Europe, for his best argument as to its feasibility. Moreover, at this moment, when American interest in industrial education far outruns the definite formulation of our concept as to what such training should comprise and a rosy glow of enthusiasm lights up clouds of theory, renewed study of the well-tried European systems is à propos. France and Germany are emerging from the educational renaissance at whose beginning we find ourselves. Lack of perspective and of thorough investigation prevents us from judging rightly the effectiveness of our first experiments in trade instruction. But the oversea school presents no such difficulty. There we read plainly the failure of methods on

trial in our own country. There we see large-scale experimentation with appreciable results, and gain a criterion for testing the worth of our own gropings. There we learn what painstaking study of the business world must precede the drafting of a successful program.

Trade schools for beginners may undertake to supplant or to supplement apprenticeship. German schools belong as a rule to the second, French, to the first, class. Among German schools there are two types: the Berlin continuation school, which supplements apprenticeship by general intelligence courses and relies upon the child's labor in his master's shop to give him trade practice; and the Munich institution, which includes practical work in the curriculum.

These three forms of the industrial school are the product of equally distinct ideals. That of the French educator is a skilled artisan; Berlin has in view a well-informed worker; while Munich strives to produce a useful man.

I. Paris

At thirteen, the Parisian child of poor parents, having mastered the three R's and got a smattering of French history, completes his required schooling. A few years ago only two courses then

opened before him: to go at once to work or to continue a purely academic education through the public high school and fit himself for commerce or clerical positions. But this was at last found unsatisfactory. The majority of French children, as is true of children in any other land, are destined for industry. The schools not only failed to train them for this, but actually rendered them unwilling to do manual work for a living. Despising their only means of subsistence, hundreds of girls went on the streets to avoid "degrading drudgery,"[1] and thousands of boys found themselves unable to obtain places in the already overcrowded clerical and professional field. Meanwhile there developed in industry a crisis unparalleled in the history of other countries and threatening to destroy the century-long French preëminence in hand industries. Apprenticeship had become a dead letter and specialization had so degraded the quality of labor that employers were confronted by an absolute lack of skilled workers. Meanwhile the colleges were turning out theorists and overseers, who found themselves in the anomalous position of having no one to oversee. On the other hand,

[1] See *Prostitution des Enfants*, Eugène Prevost, Avocat à la Cour d'Appel, Paris. 1909.

unemployment assumed the proportions of a Problem.

In the face of German competition, public interest rose to fever heat and so remains to the present day. All over France trade schools have been established *which aim to meet the desire for popular education, and to replace the old-time apprenticeship as a preparation for business.* These have proved utterly inadequate in number to supply the demand for skilled workers. The situation is aggravated by two imperfections in the child labor laws, which have, on the one hand, allowed many children to work before they have acquired the rudiments of an education; and, on the other, forced them, as is indeed the case in our own country, into the lowest of unskilled labor which offers no prospect of advancement and substantially unfits the little worker for other and better paid positions.

Alarmist literature and agitated discussion of the subject abound, discussion originating with educators, employers, and social students alike. A special League for the Encouragement of Apprenticeship has been formed. The only element, in fact, which is not yet fully aroused to the necessity for trade instruction is organized labor; and it is safe to say that the unions do not

object to trade schools *per se*, but fear that the capitalists will use them to train cheap labor to complete with union workers.[1]

Meanwhile a fire of criticism, favorable and adverse, is directed toward the elementary schools now in existence. It is with this vocational school for the plain man, with the actual classroom experience of its pupils and the proved successes and failures of this experience as a preparation for trade life, that the present chapter is concerned. Paris boasts fourteen such institutions[2] which children may enter upon completion of the grammar grades, each having for its object the training, not of overseers, but of ordinary workmen.

In the land which, next to Italy, has made art most nearly conterminous with life and which has more than once in philosophy and govern-

[1] In Paris 124 out of 229 trade unions voted in favor of trade school work.

[2] For boys: courses in the metal trades, pattern-making, decorative art, industrial design, pottery, sculpture, cabinet-making, surveying, mechanics, electricity, and the book industries.

For girls: trade and domestic science work, including cutting, sewing, lingerie, tailoring, embroidery, pressing, corsets, vests, artificial flowers, industrial design, pottery, fine art, book-making, typewriting, stenography, laundry work, general housework and cooking.

ment pushed symmetry to the breaking point, one finds, naturally enough, the two salient features of the schools to be emphasis upon artistic values and close correlation of all parts of the curriculum. Both these features are particularly marked in the *École Estienne*, a boys' school devoted to all trades connected with bookmaking.

A glance at the course of study brings home the complexity of the business world which the pupils enter upon graduation. The subject of typography comprises four distinct trades: typesetting, type-founding, printing, and stereotyping. Lithography is split into lithography proper, lithographic script, stone engraving, and lithographic printing. Engraving covers wood engraving, engraving in relief, copper plate, and photoengraving, and printing from copper plate; while binding is divided into binding and gilding. Four years of eleven months each are required to gain a certificate of apprenticeship in any of these trades. Sunday is the only holiday and the school holds from 8.30 in the morning till 6 at night.

The mornings are devoted to theoretical work: the afternoons, to practical instruction, except for a slight preponderance of practice in the last years. Each trade has its own shop for practical

work in charge of special instructors, and during the first four months of the term, the new pupils attend in rotation all the workshops in the school and thus make choice of a profession.

In spite of the complexity of the problem, the course of study is a coherent unit. The morning lessons in theory (comprising French, general history, geography, history of art and of the book industry, mathematics, physics, chemistry, zoölogy, drawing, modeling, writing, and original design) are the same for all pupils in the first two years. In the third and fourth years, pupils are grouped in three sections which handle subjects bearing most directly upon the individual trades. In the case of the lithographers, engravers, and gilders, designing predominates; with the typesetters, it is French, and general information; while the printers and founders study in more detail physics, chemistry, and mechanics. This orientation of theory towards practice does not begin in the third year, however. With the opening of the first year, the pupil finds that what he learns in one course is not so much isolated knowledge, to be saved up till that class and its quizzes come round again, but something he will take up and use when the bell has tapped and his next period begins.

The principles of plane geometry as studied in the first year are applied, in the courses for geometrical design, to the composition of vignettes, margins, and covers. Flowers, treated scientifically in botany under one instructor, are drawn and modeled from nature in other classes; form the subjects for the conventionalized tail-pieces, illuminations and fancy initials which the students design in the third and fourth years under a still different teacher; and are then used as working plans in shop practice. The different styles discussed in lectures on the history of art are actually copied in drawing-class; are modernized and adapted to the needs and materials of particular trades as original designs; and then put to use in the various ateliers. Where the designs for shopwork are not made in the drawing-class, they are still made by the pupil himself and are applications of the principles there laid down. Although they also set up after models, typesetters often design their "ad's" and pages; gilders, their stamps; and type-founders, their fancy type; while engravers execute their own drawings. Physics and chemistry are not only taught parallel with botany and zoölogy, where they are of constant use in explaining the phenomena of growth and decay, but are made to

apply to the concrete problems of photography, engraving, etching, founding, and machine operation. History and geography are connected in like manner. History and the history of art are made interdependent. The history of the book industry draws from both sources. Classes in French utilize material from every other department for composition subjects, for dictation, and for illustration of grammatical rules. In short, what is learned in the theoretical courses under one teacher is applied in an original design under another, and in the afternoon, put into practice in the workshops. The constant effort is to develop originality and creative power in each pupil, and, because the whole course hangs together, he is helped to constructive thinking which will make connections for itself. The children see where their work is tending and of what practical use it will be to them. They are therefore interested and intelligent. Because everything they turn out in the shops represents their cumulative effort, they take that pride in the finish and artistic quality of their product which has hitherto given to French hand industries world-wide supremacy.

A further correlation takes place between the practical work in separate trades. The printers

use in their presses what the compositors have set up with type from the founding class. This is illustrated by the engravers with cuts used in the courses for impression taking. Perhaps the printed book or pamphlet then goes to the binding-rooms and is at last finished and gilded by pupils in still another trade. Thus, not only does each pupil feel that his work has a definite practical outcome, but a whole class may work together to produce that which can be put to direct use somewhere else, and ultimately serve to arouse *esprit de corps* in the entire school body.

Examination of the work of the different departments shows how closely consideration for artistic values is woven into every portion of the individual courses. Each practice class spends a large portion of its time in considering the special art problems of its trade. The pupil must learn to reproduce the ordinary objects of his drawing-class with the tools of his calling: the graver's awl, the lithographer's pencil, the gilder's stamp. He must apply here, through a new medium, the principles of beauty he has elsewhere evolved, and is brought to see that a catalogue, a poster, an advertisement, is governed by the same laws as the painter's masterpiece.

In the *École Boulle* are taught the marvelously

many trades involved in the making of a single piece of furniture, beginning with the designing and following through the making of the frame, the molding in plaster of the prospective ornament, the actual carving of the wood after the plaster model, the inlay, and the iron, brass, and nickel work, down to the polishing and varnishing. Here, too, the emphasis is upon the artistic and creative sides of production. Mr. Brizon states the purpose of the school to be "to train workers able to conserve the traditions of taste and the superiority of the peculiarly Parisian industry of artistic furniture." To conserve the traditions of the glorious past in French furniture, the school has a special exhibit room illustrating various styles famous in the history of the industry. This set of replicas, made in the school, is supplemented by a collection of casts representing types of ornamentation. In speaking of the equipment of any Parisian school, one must always bear in mind the great museums of the Louvre and of Cluny, which are arranged to be patently educative and which are used much more extensively for school purposes than any remotely comparable American collections. All these factors skillfully employed by the teacher of art and industrial history, serve to steep the pupil,

not only in ideas, but in the fact and spirit of his trade as an artistic development. The last year of the course is devoted to modern styles in furniture-making, and the pupils are encouraged to create for themselves, on simple lines, designs which sustain the standards and modernize the spirit of the great artists with whose work they have become familiar.

This effort on the part of the instructors in art fits compactly into the scheme of the practice work, in every branch of which the pupils execute after approved models for the first two years and design for themselves during the last. This plan is intended to combat the disintegrating tendencies in modern furniture-making — slavish imitation of old models and flashy novelty in ornamentation. It is hoped that by a study of the history and theory of former styles, the pupils will be led to imitate, not the patterns, but the spirit and the methods of the old masters; and, in the same way that Louis XIV's great cabinet-maker, Boulle, developed a style appropriate to the civilization in which he lived, themselves come to understand what is suited to the life of the modern household.

The course in wood carving illustrates the general plan of treating art in connection with

practice. The elementary exercises are naturally directed toward the mastery of tools and materials. When a tolerable degree of skill is acquired, the pupil begins to design for himself. Suppose a chair is given for decoration. He applies what he has learned in drawing to make a sketch for the proposed ornamentation of a leg. This he must model in clay to get a good idea of the form and test the applicability of his flat design to sculptured relief. He then makes a plaster cast of his corrected model and from this pattern executes his carving. More advanced students carve from a sketch without plaster pattern, but not until their sense of form and body is as well developed as that of outline.

Not only is every course in every Parisian school colored by regard for artistic values,[1] but the aim is also to combat specialization in its narrowest sense. The hours devoted to practical instruction are not exclusively occupied by bench work, but comprise the technical instruction necessary to a perfect understanding of the work in hand in its relation to the trade as a whole. The effort is also toward varied practice. The copper-plate printer in the *École Estienne*, for example, is given practice

[1] There are also successful schools for both boys and girls which teach industrial design as a special trade.

on job work as well as *éditions de luxe*, on visiting-cards and bills, on illustrations and maps, whereas, were he serving an apprenticeship in a shop, he would learn only the specialty of that shop. Courses for artificial flower-makers teach, likewise, all sorts of flowers, on the branch, after nature, and for the modes. The student of jewelry specializes at either the hand or machine process, but becomes familiar with both methods, as well as with the manufacture of the stamps used. General trade intelligence and not particular manual skill is the end in view; yet the proper basis for manual dexterity is given in the thorough understanding of all processes and in the constant use of real machines and real trade materials.

Teaching a complementary trade not closely allied to one's specialty is a feature peculiar to the *École Boulle*. This is the same for all pupils —hammered brass and copper. The children spend an hour a week for three years at this, and while they do not attain great skill, they are capable of turning what they learn to practical use in case work fails them at any time in their trade. This brass and copper practice was chosen both on account of the comparative ease with which some degree of proficiency can be acquired

and because the recent revival of interest in hand-hammered goods gives certainty of finding odd jobs.

As attendance upon trade schools is not compulsory in France, sweeping inferences as to results are dangerous. Some phenomena are, however, obviously attendant upon the foundation of trade schools. The school enrollment has risen greatly; and the percentage of daily attendance and the ratio of graduation to first year enrollment is higher for vocational than for academic schools. M. Brizon quotes in his *Apprenticeship: Yesterday — Today — To-morrow*, the opinions of employers and educators that the ultimate wage-earning capacity of the trade school graduate is considerably above that of the average apprentice. A majority of the Parisian manufacturers' associations have unanimously expressed themselves as favoring public industrial education, but their commendation of the ideal is tinged with an ever-recurring criticism of present trade school methods. The furniture workers maintain that, although the trade school graduate is less adroit at first, because of his general education he is better later on than an apprentice. The heavy-iron workers find that, though in the end he shows himself more intelligent, the trade school youth

is at first wasteful and hence paid less than an apprentice who has been in industry while his colleague was at school. Dressmakers prefer trade school graduates because they produce at once; jewelers, because they are all-round workmen. But printers, photographers, and engravers prefer *apprentices who take professional courses in connection with trade work*, because they are swifter. "Trade graduates have had too little practical work." The Council of Makers of Instruments of Precision sum up the problem in saying that if graduates of trade schools are willing to begin at the bottom and put themselves *au courant* with the trade, they become better workers than those who have not had school training; but that often they are not willing to do this and are then too theoretical.

In short, *there is a gap between the French trade school and business conditions which the trade graduate must bridge for himself; and the spirit of the school often unfits pupils for bridging it.* In spite of the studied symmetry of the course; in spite of the cultural and intellectual value of the three or four years spent in the classroom; in spite of the general trade intelligence the pupil has gained; — in spite of all these undeniable assets, he enters industry

handicapped. He is unaccustomed to conditions of work in a shop where competition forces economy of time and material. He is exquisitely careful in the execution of his tasks, but is neither speedy nor dexterous, and these latter failings account for the dissatisfaction of so many an employer with trade school pupils.

One solution of this difficulty is offered by the school for girls in Fondary Street, which teaches the distinctly feminine occupations of sewing, tailoring, millinery, and laundry work. The academic side of this and similar institutions is neither so varied nor so thorough as in the boys' schools, because girls are not expected to make such serious use of it and do not often engage in professions demanding high-grade intelligence. But an especial effort is here made to keep in touch with actual trade conditions by having the senior pupils fill orders for the clients of their several departments. This insures variety in work and gives interest in saving time and material and in the quality of the output. The difference between the courses which follow a *clientèle* and those in which the children work on models and with sham materials is striking. Nowhere in the former is that slackness and waste of material evident which marked each course of the latter

type visited. The school in Fondary Street has the aspect of a select shop. As in all Parisian schools which sell their products, prices are everywhere a little higher than those on the regular market, since they are fixed to cover the increased cost of production in a schoolroom where work is slow and the factory foremen are replaced by high-priced teachers.

The League for the Encouragement of Apprentices proposes another remedy for the all too evident cleavage between schooling and practice: i. e., part-time day schools compulsory for apprentices in industry and in charge of men with extensive trade experience. In other words, this League, which has studied more thoroughly than any other agency the business and educational aspects of the French situation, looks to Germany for the solution of its problems.

II. Berlin

While trade schools in France have been the slow response to a crying need, the German system of education is more truly the result of foresight. To understand any German institution, we must remember that for what many another nation owes to haphazard growth through the ages, the Teutonic empire must thank the sys-

tematic plans of her rulers, who, within a century and by a concerted scheme of action, have developed Germany from a group of negligible petty kingdoms to one of the foremost world powers. In this development, the industrial and commercial policy of the government has had, if not the title rôle, at least that of principal support. Political integrity was not enough. Germany must be both industrially self-sufficient and necessary to the consuming world at large. As every young German is trained to defend his country in time of war, so is he also trained to defend her in the markets of the world in times of peace. That this program has been successful is attested by the rapid commercial advance of this newest of nations. Not only does Germany produce an amazing proportion of what it uses, but German goods have captured the French market and are invading even England and the United States. We buy hundreds of articles whose label, "Made in Germany," may be a lie about the place of manufacture, but is no uncertain hint as to where they should have been made to secure first quality. In the words of a French student, — and the French, oddly enough, are Germany's most appreciative critics, — "Germans lack initiative and inventiveness,

but these things are trained little by little into the people by a system of education ever on the alert to inculcate good methods of work. The results which Germany has obtained she owes largely to scientific methods."

Of course a deal of cheap nonsense is talked about the prosperity of the Fatherland. Germany is not yet the modern Eden, or else the tide of immigration — that most delicate industrial barometer — would set away from the United States and toward our martial cousins. Though she manages to tuck them effectually out of sight, Germany still has her poor and sinning. But the traveler must be impressed by the solid aspect of German towns, by their inner strength and self-sufficient Germanness, and by the absence of that pitiful catering to tourists which marks the decadence of Paris. Even the tiniest stores have tasteful show windows arranged with remarkable sense of color and proportion. Far more extraordinary than the lovely flower displays, which brighten many a grim side street with the sunshine of daffodils and marigolds, is the beauty of dairies and butcher shops, recalling, by their profusion of herbs, jellies, sausages, fruit and gamè, some splendid still life by Fyt.

One involuntarily asks oneself where that dumpy little fellow in the linen apron, who has come out to eye his wares critically from the curbing, ever caught the knack. He would be prompt enough in his answer if the question were put to him: "In the continuation school for butchers."

The French system of trade schools may be termed optional supplanting of apprenticeship. The German is a compulsory supplementing of it, and to the continuation schools of Berlin must go every boy between the ages of fourteen and seventeen, who is at work in commerce or trade.[1] The six hours a week devoted to schooling are usually taken from the working day and the employer is made responsible for his apprentice's school attendance. Some courses are given on Sunday, others at night, but there is a strong movement on foot to bring all classes into the daytime and, where possible, into the morning schedule.

Since the age qualification is the only requirement (completion of the grammar grades being entirely beside the question), the continuation schools receive pupils at widely different stages of advancement. The boys in each year are there-

1 It is hoped soon to extend this compulsion to girls as well.

fore grouped, according to their preparation, in three sections, work for which follows the same general plan, with special adaptations as the needs suggest, makes up for past deficiencies, and carries the pupils forward as far as is compatible with thoroughness in every inch of ground covered. A typical continuation school in the Moabit district offers six hour per week courses for machinists, locksmiths, merchants, craftsmen, and unskilled workers such as errand boys. Instruction in the five departments is entirely separate. There is no practical work in the school; manual skill and knowledge of trade processes the child must pick up under his employer. The school continues the work of the grammar grades with special application to the trade at which the pupil works; gives general historical and technical information about this trade; and familiarizes the pupil with the laws governing it and with his own relation to the city, state, and nation. To impart general information in such a way that the child will apply it to his work and his social relations is, in short, the ideal.

The instruction comprises German, civics, technology, mathematics, bookkeeping, and drawing. The drawing differs with the department.

Machinists begin with the principles of mechanical drawing and pass to copying separate parts from machines used in their respective trades. These models are chosen for their typical value in machine construction as well as for training in drawing. Finally entire machines are copied, and the apprentice who, in industry, is engaged in the manufacture of some infinitesimal part of an object, learns the connection of that part with the whole. The pupils thus understand without explanation specification drawings given them in the shop or factory; and as ability to sketch a desired machine is essential in a foreman or upper grade practical machinist, this course in drawing is the initial step in advancement for the cleverer pupils.

The work connects directly with the course in technology, which is really the nucleus of the entire curriculum. Here are studied trade materials, their origin and uses; the main operations of the trade; the principles governing them; the finished products and their uses; marketing and prices. A painter must learn all his implements and the special uses of the different kinds of brushes and colors. He must understand the manufacture and the blending of oils. He can tell from what flax-seed oil is made; can describe

the plant and its culture; knows where it grows and the color of its blossom, for he has seen it in the school collection, and drawn it for his designing class; and can tell other uses of the flax plant. He learns the relative cost and value of different oils and *can explain* these facts intelligibly. In short, everything which enters into a trade must be thoroughly understood not only in that specific connection, but in all other connections. As one readily sees, this gives opportunity for imparting varied information of a popular and scientific kind, and instruction in industrial history and geography is here introduced. The teacher keeps in mind the fact that he is not only training labor but educating men, and while the trade is the pivot of the course, the importance of mental drill and culture is not forgotten.

Mathematics follows upon the class in technology and is directly dependent upon it for subject-matter. After the class has studied a given material, all possible problems which might arise any day in connection with it are solved. The text-book is thoroughly practical, having been prepared by educators and business men in collaboration, and its success is attested by the keen interest of even the dullest pupils. Each

boy is required to keep an account-book for a firm doing business in his line.

German is presented in the form of business correspondence, but all the courses are, in a manner, training in the proper use of language, as no pupil is allowed to respond in less than a complete, correct sentence.

The continuation school trains the man at the machine. For the ambitious worker who wishes to rise in the industrial ranks, there is the higher trade school represented by the *Berliner Tischler Schule*, whose purpose is to give cabinetmakers, who have already for several years engaged in the practice of their trade, an opportunity to round out by exercises in joinery their one-sided training due to present-day specialization. It is a day school with a two year course (open to persons who have completed a two year apprenticeship), including recitation and practice in artistic joinery and in the use of machines, study of materials, industrial chemistry, commercial law, trade mathematics, and industrial design. All the pupils have attended the continuation school during their apprenticeship, but wish to supplement the exclusively *theoretical* training there given by an all-round *practice* which they cannot get in a shop or factory where each employee

has a specialty which he follows year after year, and where, in all probability, the factory itself deals with only one branch of the trade. There is absolutely no specialization in the school; each pupil has exercises in all the different kinds of joinery, and each pupil makes a whole object, thus practicing all the trades taught separately in the *École Boulle*. Coming, as the training does, at the end of apprenticeship, it makes for thoroughness and breadth, and exerts an unquestionable influence toward mobility of labor and lessened unemployment.

A similar institute is the *Höhere Weber Schule*, open to women as well as men, and presenting courses in all trades for the manufacture and use of textiles. The normal length of the course is three years, but many pupils attend merely a trimester to learn some new machine or process. The author expressed surprise at seeing men and women advanced in years working side by side with younger pupils, and was told that women thrown on their own resources often come here to learn a trade; and that men, out of employment in their own specialty and too old to be taken as apprentices in industry, acquire in the *Weber Schule* a new speciality and so continue self-supporting.

The flexibility of the German, as compared with the French system of industrial education, is here apparent. There is no rigid term of work and no general plan of instruction applied to each department and making of the entire school a symmetrical organization. On the contrary, the theoretical instruction is separate for each branch. The division of time between practice and theory and the length of the courses vary with the respective trades. The emphasis everywhere put upon drawing, and the coöperation between departments which carry out and finish each other's work, remind one of the French program. But the methods and spirit of the art departments are diverse. Whether their contrasting atmosphere is due to a corresponding difference in national temper is hard to determine. The German course is likely to stress at every point trade utility; while, in France, one begins in the realm of pure art and takes the application to the particular industry as an outgrowth of this.

In comparison with the continuation school previously discussed, the pendulum here swings almost as far toward practice as it swung there toward theory. General branches are taught as a running accompaniment to bench work and an effort is made to gain speed and dexterity. This

is the inevitable result of the presence in the classroom of workers experienced in shop methods.

One of the most interesting Berlin experiments in industrial education is the so-called practice workshop for artistic wrought iron, machine construction, and manufacture of instruments of precision, which admits, during unemployment or between jobs, workers who have had several years' experience, and teaches them greater skill in their specialty, or perhaps more of the trades in general from a theoretical or executive standpoint than they can learn in a factory. The course lasts ten weeks, but workers who wish to become foremen or journeymen ambitious for a mastership may remain longer. These latter come again and again to the school and ultimately make their "masterpiece" to submit to the committee chosen by their trade organization to pass upon the work of would-be masters.

Trade education for girls is not so well organized in Berlin as that for boys. The situation is similar to that in America: woman's position in industry is far from settled; the "housewife ideal" still dominates in many of the schools and, in others, exerts a disturbing influence on the regular trade courses. Every grade of institution,

from the domestic science section of the Pestalozzi-Froebel Training School to the simplest commercial course, is represented, including many which are neither one thing nor the other, but attempt a little of both. Germany has not yet taken a stand on the woman problem, and education is temporizing with women in the schools.

III. Munich

The journey from the sandy plains of Brandenburg to the brilliant and invigorating upper airs of the Bavarian plateau is a physical change which prepares one for the greater crispness and verve of the Munich school method. Here the German system of industrial education is seen at its highest point. There are the same types of schools as in Berlin — a flexible series that drills the man at the machine and still gives outlet for ability into the upper ranks of industry. But the age limit for compulsory attendance is higher, the hours per week of required schooling, which come in the daytime, are never less than eight, and the training given is more balanced and complete.

It may be questioned why the admittedly faulty systems of Paris and Berlin have been described at the expense of a satisfactory pro-

gram which is thus relegated to a few concluding paragraphs. The reason for this is twofold. Paris and Berlin represent the kinds of school most common in America, — the former finding its feeble counterpart in the Manhattan Trade School for Girls, the Boston Trade School, and the new Wisconsin system ; and the latter being reduplicated, in its essential features, by the recent experiment in Fitchburg, Massachusetts. Furthermore, the best is always thrown into sharper relief by comparison with the next best, for the failures of the one illuminate the successes of the other.

The Munich continuation school actively embodies in every dot and iota of the course of study Superintendent Kerschensteiner's phrase "maker of useful men," or better still, "usable men" ; and in the clear light of this purpose, the Berlin program seems negative and wavering, a weak compromise between academic and trade ideals. With a useful man in view, the Bavarian school tries to round out the scrappy shop training of the apprentice with such studies as will give him a grasp on his whole trade. The trade can then use him as the exigency of the moment dictates. This grasp, to be complete, must be both theoretical and practical, and it is here that the

Munich educator takes issue with the Berlin method. Berlin maintains that dexterity in technical processes can be acquired only in the factory, and so eliminates practice from the curriculum as a waste of valuable time better spent in general academic drill. Munich avers that unless the child is introduced in school to all the processes of his trade, the greater part of them will always remain a sealed book to him, and he will be, not at all "a usable man," but a narrow specialist, a miscroscopic part of a man, useful in a very limited field. Skill he can learn in business as need arises, but preliminary understanding of trade operations he must get in school in order to embrace opportunities for acquiring skill as they present themselves.

The famous *Prank Schule* gives eight to thirteen hour continuation courses for eleven separate trades, one of the most interesting of which is that for locksmiths. The technology, German, and physics recall the Berlin schedule, while physiology, hygiene, and Bible history explain themselves. Composition deals with all sorts of documents which might be written in the course of the trade. The German gift for exhausting a subject without killing originality is manifested in a detailed treatment of theme work seldom

found in American schools. For instance, a class, representing a master locksmith, has written, at its last session, an order for a grindstone. This stone has supposedly been delivered in bad shape, a crack being plainly visible at its center. The manufacturing firm must now be apprised of the receipt of the stone, of its condition on arrival, of the supposed reasons for this condition, and as to whether it can be accepted or not. All these points having been brought out by class discussion, they are put upon the blackboard. Several pupils compose orally sentences conveying point one, which are criticized with an eye to grammar and style; and when each point has been thus handled, a few oral versions for the whole letter are given. At a final signal, the boys write for themselves the proposed letter, which is subsequently corrected and copied into a notebook for reference when the pupil is in business. The pace for such work is obviously set by the average, not by the best or even better pupils; but as a result of this insistent thoroughness, the average rises with each successive year.

First and second year mathematics is concerned with reckoning prices and materials. Here a remarkable amount of elementary economics enters incidentally. In determining the price to

be charged for certain locks, boys of fourteen handle competition, rent, prime costs, profit, cost of living, and other bugbears of the college student with astounding familiarity and intelligence. In the third year, bookkeeping for a firm of locksmiths is taken up.

Much that is done in drawing-class is used in the workshops. The course aims at precision, and at understanding the specification drawing, the tool, the product, and the principles of its construction.

The idea of the shopwork is to cover the most important operations of the trade and the manipulation of all its tools. Under this system few whole objects can be made, but there is talk of having the pupils make one complete thing instead of so many typical parts. The point at issue is whether what they lose in practice will be made up by what they gain in sense of unity and in the fineness of workmanship which comes from pride in the finished product. In this day of minutely subdivided toil and of complete separation of the worker from the finished product, those two points have educational value which cannot be overstated.

In the trade school for locksmiths having three or four years' experience, the work of the con-

tinuation school is carried forward with more freedom for the individual to develop his own ideas, and with far greater emphasis on artistic production. Mathematics becomes algebra and geometry; drawing and modeling from nature are supplemented by lectures on the history of styles. The Museum of Industrial Art in Munich offers an unparalleled collection of artistic smithwork from various epochs, and study of this collection bears fruit in the practice classes, where many a lock, hinge, or clasp shows the inspiration of older models fashioned with a feeling for their architectural context which is lacking in much modern wrought iron.

Every school in Munich tells the same story of correlation which makes the excellence of French trade education. But here the additional correlation with actual business practice is established. Apprentices and journeymen are studying under teachers formerly or even now foremen or superintendents in industry. Moreover, they are not, as in Berlin, left to the mercy of industrial specialization for their practice and are not studying in the abstract a trade with which their real experience must be fragmentary. Every step in theoretical instruction is illustrated by the laboratory method. The Munich teacher knows that

an apprentice seldom performs the operations even of that branch of his trade at which his master is employed. The apprentice in the shop looks on, hands his fellow workman tools, helps a little here and there. But the pupil in the school has a chance to do at some time in his course almost everything common in trade practice.

The range of subject-matter taught in Munich trade schools seems restricted in comparison with the Paris program. But it matters little what one has studied if one has acquired that asset more precious than encyclopedias of information — the ability to think. There is reason to believe that in doing one thing completely, the pupil develops a more thoughtful habit of mind; and that, having learned by thoroughness in a smaller field how to think a thing out to the ultimate detail, he will be a more apt and creative workman and a more intelligent citizen. At least he will be industrially resourceful, conversant with his whole trade, a useful, usable master of the iron hand.

IV. Switzerland

Before leaving the subject of foreign experiments at trade education, a word must be said about the mountain republic which has outstripped the rest of the world in the matter of

compulsory education. How often does it occur to the casual tourist that his clever Swiss landlord and his apt Swiss servants owe much of their efficiency to training in a school for hotel keepers? As he travels through the bowels of the earth or creeps around mountain shoulders behind the sturdy crouching engines of the Swiss railroad, does he reflect that in spite of Switzerland's meagre natural endowment, the tremendous efforts it has put forth to develop capable citizens have resulted in unparalleled engineering achievements: in funiculars; in model sanitoria and hotels; in light and power industries, — indeed, in everything that can utilize the water power which is nature's chief gift; in a perfection of watchmaking absolutely unrivaled; and in a profusion of efficient small producers who can maintain themselves independently against stupendous odds? For a nation to live and prosper on Swiss soil seems flying in the face of Providence, and Switzerland has done it because she is, above all others, the land of public education for public usefulness.

Swiss curricula present little that is new after a survey of French and German systems of vocational education. It is the fitting together link by link of a complete chain of industrial training,

the strengthening of this chain by closely related labor and education laws, and the moral and financial support of it by labor, capital, and the general public — it is this total program which renders Switzerland worthy of special study.

A unique enactment passed in 1906 controls completely the conditions of apprenticeship in Switzerland, and since apprenticeship is so broadly interpreted as to cover any attempt by a minor at a gainful occupation, this law may be said to regulate child labor. No child under fifteen may enter any workshop or factory, and seldom may a minor work for more than ten hours per day. The proper care and instruction of apprentices by their employers is secured by elaborate regulations and a system of penalization under which an employer may forfeit his right to receive apprentices. In addition to this trade instruction given in the master's shop, the learner must be allowed certain time during his working day to attend the industrial, continuation, or general school in his district. Moreover, at the end of his apprenticeship, he is required by law and by trade union regulation to undergo a test of working ability; and many pupils who have passed the legal school age remain in various courses to prepare for this examination.

In some Swiss cantons, school attendance is practically compulsory between the ages of six and nineteen, as pupils remain from six to fourteen in the primary grades, from fourteen to seventeen in the complementary or vocational school, and then follow courses preparatory for the obligatory examination for recruits. In the canton of Geneva, the child goes at three to the *École Enfantine*, and at seven passes into the *École Primaire*, where instruction in modern languages and manual training is begun. At thirteen, he enters upon a two years' course in one of the following institutions: (1) Secondary rural schools; (2) the *École Complémentaire*, a part-time school, which "completes and develops primary education from the point of view of trade practice adapted to the needs of the special locality"; or (3) the *École Professionnelle*, which is not a course for apprentices, but is comparable to our own manual training high schools. It prepares for any higher special school and aims to develop general capacity and intelligence. After fifteen, school attendance is no longer compulsory, but "employers favor workers who follow higher courses,"[1] and often subsidize those which their employees attend.

[1] Astier et Cuminal, *L'Enseignement Technique.*

Among higher courses, designed to train average workmen, may be mentioned various night schools and several special schools giving trade preparation equivalent to apprenticeship, such as the *École des Métiers* (for building-trades), the *École Mécanique* and the *École d'Horologie.* These schools emphasize practical instruction and give only such academic branches as bear directly upon the trades in hand. Even trade theory is not extensively developed in the curricula. The *Technicum* may also be entered from the *École Professionnelle,* but is a more advanced school intended for the training of foremen in construction, civil, mechanical, and electrical engineering. While practice plays a large part in the instruction, it is not stressed so much as general trade theory, the *Technicum* being in this respect a contrast to the trade schools just described. From the secondary rural schools, country children may enter similarly graded courses in agricultural branches. Polytechnical and horticultural universities complete a system recalling the German plan, but even more comprehensive and far-reaching.

The Swiss ideal is represented by the sequence of primary, professional, and technical schools embracing the more liberal features of both French and German systems. But the existence

of the *École Complémentaire* (the part-time school in which early trade specialization appears) shows that in Switzerland, as in Germany, France, and America, economic pressure is too great to allow the mass of children to continue a general education beyond the grammar grades. The *Lehrwerkstätten*[1] in Berne offer an interesting solution of this difficulty. In this school pupils are regularly apprenticed and at the expiration of the term are paid a wage for the time they have spent in the shops. The articles they produce are turned over to the trade union council for sale and thus friction with labor organizations because of school competition is avoided. Here, as throughout the entire field of Swiss vocational training, we see a harmonious coöperation of labor, capital, legislative bodies, and educational authorities for the upbuilding of efficient citizenship and national prosperity.

[1] Public training-shops.

X

AMERICAN EXPERIMENTS

"Double, double,
Toil and trouble!
Fire burn
And cauldron bubble."

In that cauldron where the American trade school is brewing, bubbles a quantity of heterogeneous experiment — most of which has already been tried and found wanting abroad. "Experience keeps a dear school," but America will learn in no other. In our eagerness to meet the educational need of our time, we have not planned deliberately or studied our industrial situation in detail. Snatching at a multitude of foreign programs without examining into their previous success, we try them at home; and have not, so far, kept close enough account of their results to judge whether they have proved satisfactory here.

These experiments group themselves as preparatory trade schools,[1] i. e., schools which give

[1] This classification is borrowed from a leaflet published by the National Society for the Promotion of Industrial Education.

a broad, general foundation in manual and academic branches and fit the pupil to enter industry as a learner; trade schools for the average workman, whose aim is to supplant apprenticeship; technical high schools designed to prepare for the upper ranks in industry; and part-time and evening classes for persons already engaged in industry or commerce.

It is evident that most of them are reduplications of French and German types already discussed. The outline on page 151 will show their foreign parentage at a glance.

What has been said in the preceding chapter of the French and German schools may be here reiterated in more emphatic American terms; more emphatic because our industrial situation is more complex and fluid than that in any other country, and a rigid school method will therefore fall more quickly behind the times. Such scientific investigation of American methods as has been made points to the same conclusions as those already reached by European experts.

The preparatory school, which gives a broad basis in manual training and academic branches, does not specialize along definite trade lines, but trains its students in general use of machinery and material so that when they enter any indus-

COMPARISON OF FOREIGN AND AMERICAN TYPES OF TRADE SCHOOL

Foreign Type	Swiss "Professional" School	French Trade School	Berlin Continuation School	German Trade High School	Munich Continuation School
American Type	General Preparatory Trade School	Trade School for average workman, designed to supplant apprenticeship	Part Time and Evening Schools giving the theory without practice	Technical High School to prepare for upper ranks of industry. *Note, however, important difference:* The German student has already completed an apprenticeship before entering the School	Certain Private Corporation Schools for employees

try they are defter with their hands and more apt in learning new processes than the raw recruit without previous training. This school may, from one point of view, be classed with manual training high schools, in that a diploma does not certify bread-winning ability and that an apprenticeship is still necessary after graduation. From the developmental point of view, the aims of the types are the same. But the preparatory trade school differs from the so-called manual training school in having a distinctly industrial bias. By emphasizing the value of general education as a preparation for industry, it catches many pupils who would otherwise leave school early to work in poorly paid and uneducative juvenile occupations. Such an institution is the Lawrence Industrial School at Lawrence, Massachusetts, "devoted to opening up avenues to the industries and trades." As Lawrence is a textile center, the school work naturally enough borrows its subject-matter from textile industries. The three years' course comprises business English, mill mathematics, bookkeeping, industrial history, chemistry, mechanics and electricity, raw material, carding and spinning, weaving and warp preparation, fabric analysis, designing, dyeing and finishing. Special dexterity in any one of the many processes involved in factory

work along these lines is not the aim. The course serves merely as a general introduction to the industry and the industrial viewpoint. Pupils enter at fourteen; graduate at seventeen.

Such a course raises the question whether the graduate loses or gains industrially by spending in the schoolroom three years which might be devoted to acquiring that special manual skill by which he must ultimately earn his living. The advocate of this plan would be quick in his response that, at fourteen, no child has access to opportunities for acquiring skill, and that, if he goes to work, it will be in some position which leaves him farther behind than the preparatory school. But as Mr. Merritt, of the Yale-Towne Manufacturing Company, justly declares, "In considering the question of industrial education, one of the most important factors is the desire of children to earn something so that they will be independent, and also the desire of their parents to have them earn something to help toward the family support. . . . In many cases where such trade schools have been started, it has been found difficult to get sufficient pupils to fill the schools because they prefer to get into some gainful occupation." An inquiry as to reasons for leaving school, made by the author

among trade union locals in Kansas City, substantiates this observation. A frequent answer, tinged with regret, was, "Most of us stayed in school as long as we could afford it."

Until recently, trade schools which design to supplant apprenticeship have been almost the sole exponents of the industrial ideal in this country. The industrial field, for which one department of a well-known school of this kind prepares, has been exhaustively investigated by the Russell Sage Foundation Committee on Women's Work, and application of their findings to this type of institution seems warranted. The committee selected for special study that part of millinery known as "trimming," but as trade terms are very loosely employed in the business, their work had a much wider range. Two hundred women workers in the industry in New York City were interviewed at their homes by the committee's agents, who questioned them as to the number of positions they had held, the salaries received, the periods of employment, and the opportunities given for learning the trade, and as to whether they had ever attended a trade school. If so, the workers were asked how the school training had helped them in their work. The shop was then visited and the employer's opinion of the trade school grad-

uate and the need for industrial training obtained. The school attended was finally inspected and the classroom work examined in the light of the knowledge of trade needs previously gained. The results of this unique and systematic study recall the statements of the Parisian League for the Encouragement of Apprenticeship and are even more startlingly conclusive. The committee's conclusions may be summarized briefly as follows: (1) Academic training given in connection with trade work is insufficient. (2) The courses are not long enough to give thoroughness and skill. "The experience of millinery workers would seem to suggest that in modern times, perhaps even more than in the days when industrial conditions were less complex, apprenticeship must include learning the trade, as well as one process in it, if the workers are to be efficient. . . . Ability to adapt is of primary importance. . . . Yet pyschology and practical experience make it clear that such ability cannot be given in a six months' course." (3) There is not enough practice on single processes, and not enough variety in work. (4) Few of the courses use exclusively real trade material. (5) Many of the teachers are not experienced practical milliners. (6) The pupils do not, therefore, learn the trade as

it actually is ; they are not ready to take hold and do something at once when they enter a shop. (7) The school takes girls too young, and therefore graduates them too young to place themselves advantageously in the trade. (8) The school augments the oversupply of workers, which is a principal reason for the pitifully low wages and the slack seasons prevalent in the industry.

It appears here, as in Paris, that the school divorces itself from actual trade practice in spite of an earnest effort to meet the industrial needs of the day. "Our trade schools are no good. It 's altogether different outside," said one millinery girl. How to make such courses automatically self-testing, and thus prevent lapses from current methods, is a difficult problem. The particular trade school under discussion has kept no systematic track of its graduates and hence cannot judge of the results of its work ; and the temptation is great for the busy teacher to lose touch with the almost vertiginous progress of an industry which, at the beginning of her pedagogic career, she probably knew from A to Z. The industrial torrent rushes rapidly on, but the pupil is caught for the length of the training course in an eddy beside the stream. The more

complicated the trade, and the longer the course, the more urgent becomes this objection.

The same indecision between training for the home and training for the trade which characterizes the Berlin continuation school for girls is felt in our trade schools for girls as well. The short course barely gives time for one line, and a combination of two ideals precludes thoroughness in either. Admitting to trade schools girls who do not intend to earn their living by what they learn, also lowers the standard of school work. There is not that atmosphere of earnest steadiness and painstaking care which must characterize the successful worker in industry.

Technical high schools, of secondary grade, indeed, but still attempting to raise the manual worker in the ranks of industry and fit him for responsible positions, are open to the same criticisms. The Technical High School in Cleveland, Ohio, belongs to this group. The ideal of the school is at once apparent in its course of study: the shopwork for the first year being turning and cabinet-making; for the second, pattern-making, founding and forging; for the third, machine shop practice; and being, for the last of the third and all of the fourth, concentrated on some special branch. Depth and thoroughness are not so

much the aim as breadth and general capacity. To prepare the way for business adaptability, and executive advancement is the object.

Evening schools for persons already in industry are the most common and the oldest method for helping working people educationally. Cultural branches have, as a rule, formed the backbone of such courses. Of late, actual trade instruction has encroached upon the academic preserves of the night school, and we find two distinctly industrial types of courses: one offering general technical instruction, and the other giving special practice work intended to supplement the highly specialized shop training of the modern worker. Excellent examples of all three of these classes abound. The evening school has stormed the most conservative educational citadels. Those who oppose trade education in general as class education, and an undemocratic converging of the lines of opportunity upon one focus, welcome enthusiastically any effort to lift the laborer from the industrial pit into which he falls without it. The utility of the night school as a solution for the industrial training problem is, however, to be gravely questioned. For the young worker it is most unfortunate. The strain of a long day's labor in a factory or shop is

enough, if not too much, for the growing child. And even if there were no danger from overstrain, a child's mind is not in trim to profit by evening teaching after a day of toil. Neither do the short evening hours give opportunity for thorough and comprehensive instruction. It is also doubtful wisdom to give young and irresponsible boys and girls an excuse for staying out night after night alone. If the evening school has a legitimate function, it is certainly for adults. Yet even here the question obtrudes itself, "Is not the evening school a makeshift way of compensating for previous deficiencies in training?" When the public does for its young people all it should in the way of preliminary education, the night school will die. It is, figuratively speaking, the educational vanguard, a compromise which the public makes with the minority who have begun to demand, but have not yet attained, their full rights. However far forward we may push the night school, it must still be regarded as a temporizing measure, useful only in helping adults to combat unfair conditions of early training or present employment.

There remains to be considered the part-time school for those engaged in commerce or industry. This has, in America, assumed two forms:

the private apprenticeship school conducted by certain large corporations, and a few scattered experiments like Lewis Institute in Chicago and the Fitchburg, Massachusetts, High School. The latter reproduces in its essential features the Berlin system of continuation schools. The chief difference is the time divisions between school and work; in place of the six hours spent in school by the Berlin child, the Fitchburg plan provides alternate weeks of school and shop-work. The school instruction is purely academic and theoretical; practical skill must be gained in the factories of the business concerns coöperating with the school board. This plan not only presents all the drawbacks of the Berlin program in leaving the child's practice work to the hit-or-miss tactics of industrial specialization, but raises a serious problem by the duplication of the apprentice force involved. In a small scale experiment, this danger might not become apparent, but if universally applied, would it not lead directly to the equipping of twice the number of workmen needed in industry? Lewis Institute offers certain improvements upon the Fitchburg plan in the way of shop practice, ten hours of the school week being devoted to founding, pattern-making, machine construction and

forging, but the duplication of the apprentice force remains.

The Munich program, which has proved most efficient among foreign schools, is carried out in the United States only in a modified form and by certain wealthy corporations. The apprenticeship schools of the General Electric Company, the Westinghouse Company, the New York Central Railroad, and a dozen other well-known and prosperous concerns attest the success and economy of this method of training workmen. In drafting a final program for public trade education, study of these institutions must play a prominent part. The instruction there given may be narrow from an academic and cultural point of view, but it comprises the necessary industrial elements. It teaches what business needs; the public schools would add what society and humanity need. The General Electric Company's school devotes seven and one half hours per week to theory and fifty-five hours to shop practice in training-rooms equipped for this special purpose. This plan secures both the advantages of the French school, where the work is done under the eye of an instructor, and identification with actual conditions of manufacture — an ideal opportunity which none but the most powerful

of corporations can supply, and which is most nearly approximated in the educational world by the part-time continuation school, including general practice in the curriculum.

The Yale-Towne Manufacturing Company has, for several years past, had in operation such an apprenticeship system which is in effect a practical trade school, producing men for its own work, but also men who could readily adapt themselves to any mechanical operations. Apprentices are paid increasing wages during a four years' course, at the end of which a certificate of graduation is awarded, together with a cash bonus if service has been satisfactory. All graduates are encouraged to remain in the employ of the company and are given substantial increase in wages when they enter upon their career as journeymen. The instruction of these apprentices is carried on in special training-rooms under expert teachers in the different grades of work manufactured and in the handling and repairing of machine tools. Opportunity is given to show inventive ability. Each apprentice is taught individually and is advanced in accordance with his ability. After about two years in the training-rooms, the apprentices are usually placed in different departments of the factory, where they work with

journeymen and come more closely in touch with the regular factory routine.

To acquaint them with the science which lies behind the design of the machines and tools, and with the problems they must meet later on as foremen, the apprentices are required to attend educational classes provided by the company. For these sessions, which fall during working-hours, they are paid the same as when at the bench. The course of study comprises arithmetic, elementary algebra, mensuration, elementary trigonometry, elements of mechanics, power transmission, strength of material, mechanism, mechanical drawing, machine design, and jig and fixture design. In addition, the superintendents and foremen give practical talks relating to the trades. These classes usually occupy six hours per week, twelve weeks constituting a term, and three terms, a year. Advancement is contingent upon passing an examination at the end of each term.

The results of this school have thus far been beneficial to both the apprentices and the company. In quite a number of cases at the end of the second year, when the apprentices have become skillful enough to run an ordinary machine, such as a lathe or a milling-machine, they have

been drawn off from their course by the offer of high wages from some outside shop. During the recent rush to make automobiles, for example, the automobile shops offered unreasonably high wages for only fairly skilled hands; and yet these opportunities to work before completing the course show that the apprentices were receiving in the Yale-Towne shops a training measurable in dollars and cents, and sufficiently flexible to admit of ready industrial re-adjustment.

In classification of the multiform departures along this newest educational byroad, many numerous and valuable experiments have necessarily eluded pigeon-holing; and the line of demarcation between the several classes suggested has been difficult to determine. No two courses are alike; no two have even the same ideal. Each has been shaped by the personal bias and the general observation of some individual or groups of individuals rather than by a systematic study of the industrial conditions they were designed to meet. American treatment of the subject has been deductive rather than inductive — a result probably of the fact that the movement has been under the wing of the educational authorities with strong preconceived ideas and academic interests. Within the past few years a different

school of enthusiasts has arisen who cry out against present educational methods as sterile and futile, who would eliminate from the course of study all unnecessary and unpractical fields of culture, and train our children with a single eye to working and earning capacity. Neither camp has as yet possessed the whole truth about trade education. The man who would over-academize trade education robs it of its function and virility. The over-practical enthusiast who measures teaching by dollars and cents, and discards everything that has no immediate industrial utility, robs the child of his educational birthright. Man is made for more than wage-earning, but man has a right to wage-earning ability, for "his further development along cultural and other lines is conditioned by his capacity to support himself."

No discussion of trade education in America would be complete if it disregarded those industrial schools for the negro, which led in a movement that has now extended to black, red, and white alike. Even during the pioneer stages of negro education, the faculties of Hampton and Tuskegee Institutes held that broader conception of industrial training which saves the trade school from pure utilitarianism. With them it was never the trade for trade's sake, but always the trade

for the man's sake. These two great schools were not organized to train labor, but to uplift and rehabilitate a race. Forty years ago Hampton Institute was a living embodiment of the conviction that education is the most fundamental method of social betterment; and forty years ago, by erecting education on a firm vocational basis, Hampton Institute struck the keynote of true constructive philanthropy. Shortsighted people have both praised and censured industrial training for the negro on the ground that it will confine him to his proper or improper sphere. Results have set at naught both these narrow inferences. Industrial education has paved the way for negro advancement by giving to every black the one right of every man of any color — the right to be of some use in the world.

XI

THE TYPE OF TRADE SCHOOL NEEDED IN THE UNITED STATES

A CLEAR-CUT ideal is the first step toward drafting a workable program. What, then, shall be the aim of American industrial education? What finished or unfinished product shall our trade school strive to graduate? Certainly neither theorist nor specialist. Highly skilled specialists are, however, what industry undoubtedly needs and lacks. But why does it lack them? Not because industry could not train specialists; but because the proper material out of which to make specialists is unavailable. Our trouble with present workmen is basic lack of trade intelligence and mental training, which prevents progress from lower to higher forms of work. It is the basis for skilled specialization, for mobility, for executive capacity which the trade school must furnish. General intelligence, general trade theory, general trade practice: these are the essentials. We may add to the old-time educational ideal one word, and read as our objective purpose, "the all-around *work*man."

The history of the trade school in our country has been so far this: consciousness of the inadequacy of academic education; expensive but too often superficial investigation of foreign schools or schools in other American cities, with an eye to courses of study and ideals rather than results; vague canvass of the business public to measure the desire for better trained workmen; drafting in the educational *sanctum sanctorum*, a program which first meets the light of day and the eye of practical criticism in the shape of a school built and in operation; hiring instructors who have once been engaged in industry, but who must now teach year after year, often summer and winter, and who thus lose touch with progress in their trades; admitting any and every pupil, whether actually destined for a self-supporting career or not; finding places for a few graduates, but in almost no instance keeping systematic track of each pupil with a view to testing and reconstructing classroom work in the light of its failure or success as a preparation for industry.

Needless to say, this procedure began at the wrong end, soon left solid ground, and has been navigating the upper airs of educational theory ever since. Much really excellent work has been accomplished by American industrial schools.

But the whole subject is, as yet, nebulous; we do not know how successful we have been or just where we have failed. Instead of duplicating untested curricula, instead of blindly following the blind and investing in expensive educational plants which experience may prove to be unprofitable, let us preface the grounding of vocational schools by a careful survey of our industrial needs and a rigorous testing of the work of already established institutions.

Fundamental questions to be answered at the start are: what industries the school must feed; at what age these industries take on helpers; what sort of work beginners do; what training they are given in the shop; and how many new helpers per year these industries require. We must know what per cent of workers are women; must determine woman's stability as an industrial factor, and see whether it be true that the average woman worker merely passes through industry on her way to marriage. We must know the working conditions and wage scales for these industries, and the qualities upon which promotion depends. We must put ourselves thoroughly in touch with the workers themselves as well as with the employers, and a labor union may have as much to teach us as the manufacturer. The

trade school should look impartially to the good of the greatest number; it must not ally itself with any special interest; must remember that what industry can get out of its workers is no more important than what workers can get out of industry. What the trade needs can be learned from the trade alone; but for what the man needs that the trade may not victimize him, we must go to his living as well as to his working conditions. Business men, foremen, journeymen, trade union members, educators, and philanthropists must join in drafting the program.

Rigorous testing of the work of already established schools ought to have been done from the very beginning by the schools themselves. Each graduate should be followed for several years and the value of his preparation measured in his own and his employer's eyes. Only thus can the school tell whether it is furnishing industry what industry needs; only thus, if at all, can a once flawless curriculum be kept abreast of the times; and only thus can we tell what to save and what to discard in grounding new vocational institutions.

Since no such exhaustive study has yet been made, we are scarcely ready to pronounce upon what kind of trade education will produce the

all-round workman demanded by American industry. It is, however, certain that only a very flexible form which will continually readjust itself to changing industrial conditions and be continually and automatically tested by industry, can satisfy our needs. We require, furthermore, the system which will never create an artificial supply of workers and which will be at once most economical of time and of results. Can we best attain these ends by preparing for, by supplanting or by supplementing apprenticeship? Which of these systems has proved most effective in Europe? *The Munich continuation school, with its obligatory supplementing of wage work for apprentices already placed in commerce and industry.* Which system do our successful business enterprises in America embody in their training schools for apprentices? *Theoretical instruction and general exercises in practice are given under the eye of a teacher, but the learner is also put into the factory to work side by side with journeymen who are producing for the market.* No set instruction can supplant drill at the machine under commercial pressure; nothing can give such timely correction to the inevitable classroom inflexibility. General trade knowledge, general trade practice may be acquired in the school; speed, dex-

terity, and the verification of classroom knowledge come in the trade; and by a combination of these experiences, time is greatly economized, the pupil is able to earn while he learns, and emerges from his training more intelligent, resourceful, and competent. The school for generalizing, the factory for specializing — a continuous and clarifying interaction! — a flexible self-testing system whose courses cannot well lag behind the times, since every pupil is conversant with actual business conditions!

To decide that the school shall perfect our present labor force determines when definite trade instruction should begin. Certainly not before the working age. Premature specialization dwarfs the mind and ties the child down for life to the possibilities of a few simple reflexes. Youth has a right to growing time. There is necessary, too, for intelligent work, a substratum of culture and mental drill, to furnish which a complete grammar course uninvaded by bread-and-butter responsibilities is none too long. We may begin early in the school life, however, to lay the foundation for trade dexterity, as well as trade intelligence, by introducing manual training into the grades. What psychology calls basic skill (whether mental or motor) is acquired very early, probably before the

twelfth year. If broad muscular adaptability is gained in the grammar grades, the child will come to the higher school — trade or academic — self-controlled, effective, and able to lay hold of special processes without fumbling.

What balance shall be maintained between the academic and vocational, the theoretic and practical elements in the trade school curriculum? We have already seen that theory and practice must go hand in hand to produce an all-round workman and that the school cannot safely leave practice to the shop. The other question is far more difficult to answer. Yet we must remember that by inserting the word "work" in the old educational rubric, we have not changed its import. The test of education has always been utility; the Latin high school, the academic college course were once vocational. Now that new lines of activity come into being, new sorts of work need to be done, we change, not the method, but the matter. The oft-drawn contrast between liberal and practical education does not exist. Both mathematics and chemistry develop thought power, similar, except for the sphere in which the thinking is done. The student of language receives what is for him a practical education, and yet language study is commonly denominated a liberal

or cultural branch. All good education is both practical and liberal; and the training which was once practical for preachers and lawyers is no more liberal than that which is to-day practical for engineers, machinists, or men of business.

If there is no inherent difference between professional and trade education, then whatever in the one is calculated to broaden the vision, strengthen the mind and quicken the sensibilities, is equally proper to the other. Mathematics, science, geography, history, language, literature, music and art — these are subjects of universal applicability, universal utility. But because the young industrial worker has no further apparent use for the half-developed material of his grammar course, he forgets it. Mary Woolman[1] points out that the majority of girls enter the trade school with a very meager general education in which they are not interested because it seems to them useless, but that when they see its bearing on their daily tasks, they desire to study further. The practical instruction is thus their first glimpse into the world of culture. Indeed, "those whose environment is work, find more culture in a trade than in a purely academic school." It opens their eyes to the real vitality of what has before seemed

[1] Formerly head of Manhattan Trade School for Girls.

dead knowledge, but without which, mere manual dexterity is profitless.

Certain narrowly utilitarian advocates of industrial training, who are not less one-sided in their view than the devotees of so-called higher education, would reproduce in the trade school that very unfavorable industrial situation which it is designed to combat. Yet the vocational idea has not come thus to pare down the man to fit his industrial niche and to strike cultural subjects from school curricula, but to preëmpt and till new fields for culture. Man is a composite; toil is not his only aspect. Education must develop not merely efficient producers, but efficient consumers; and it must provide resource from work as well as preparation for work. Rhythm is the law of life; but there is no rhythm in the existence of one who has never learned the secret of recreation. This secret is not in alternating work and idleness, for nature abhors a vacuum and idleness is not possible for the human mind. The old chord of work will go on vibrating even during enforced physical quiet if some other chord is not touched. A wide range of interests is therefore necessary for sane and wholesome living; and anything which will develop broader sympathies and open up new modes of recreation—all those features of modern

schooling which are too frequently stigmatized as decorative frills — are in the highest human sense utilitarian.

The object of vocational education is civic as well as human and industrial; is, as our preface stated, to hold pupils in school until they are prepared for citizenship. Therefore, history and civics belong here even more emphatically than in the academic school, since to the trade school will come eighty per cent of our voting public.

In short, we conclude that the trade school must not only train dextrous workers, but give, in terms of the working pupil's life, the mental drill he misses by not attending an orthodox high school.

The character of work to be done in the vocational school determines the qualities desirable in teachers and superintendents. In the reaction against academic ideals and methods, instruction in trade schools, and even their management, is often confided to persons with wide trade knowledge and experience, but without pedagogic training. Most of the instructors in the Worcester, Massachusetts, trade high school, for instance, had been foremen in local shops before taking their present positions. One of the masters voluntarily remarked to the author, "I am not a

trained teacher and when I came into the school, I knew almost nothing about how to present a subject to my pupils. I knew how things ought to be done, but to show the boys and make them understand was another matter. To show thirty boys at once was quite different from showing one greenhorn in the factory." Here was a man who knew industry well, who had just the information of which his pupils stood in need, but who was handicapped by lack of transmitting power. Before he could teach, he must learn how by lengthy practice on the youths who came to him for instruction. On the other hand, there was, in one of the academic branches, a professional high school teacher quite unacquainted with the trade needs of the boys under her jurisdiction. She was teaching in accordance with the old academic ideals and completely vitiating any vocational atmosphere which her subject might have had. In this one school were presented both horns of the dilemma which confronts us in an attempt to secure for the trade school an efficient faculty. The workman cannot teach and the teacher cannot work. For this new field we need a new educational birth molded of trade and scholastic ideals. The successful trade school teacher must be broadly educated, peda-

gogically trained, and industrially practiced if he is to develop at all points the capacities of his pupils. The mere mechanic whose vision is limited by factory walls will perhaps (after he has learned to instruct them) make adroit workers of his pupils. But he will not be able to widen their outlook upon life or even upon industry beyond the narrow view which they might obtain by serving an apprenticeship in the factory which shaped the master.

Awake to the fact that vocational training is not merely a trade but an educational problem, some European countries have special normal courses preparatory for trade school positions and require, in addition to this theoretical training, not only that the teacher must have been employed in industry before his pedagogic career begins, but that while he is engaged in teaching, he must still spend part of his time in a factory of the type for which he prepares his pupils. Thus it is hoped to obtain as instructors both good mechanics and broad-minded, well-balanced men of practical culture.

But what will supplementary courses do for the unfortunate young people who have, as yet, no job worthy of the name of trade? What of the thousands of children in the so-called juvenile oc-

cupations where "the best is like the worst"? What of messenger boys? Office boys? Errand boys? What of the entirely unoccupied child?[1] The Manufacturers' Association in its 1908 convention disapproved of founding schools for youths already employed in legitimate commerce and industry until those outside had been provided for, justly arguing that they stood most in need of assistance. To help the man who already has a job and desert the poor devil who can't, through lack of training, procure one, seems an over-cruel application of the parable, "to him that hath shall be given." Here appears the true function of what we have called the preparatory trade school. There is no future in his own calling for which we can perfect the messenger boy, but we may perhaps open up avenues to better employment in other lines by giving general manual, mechanic, and business training which can be turned to good use in any trade. Perhaps, too, when continuation schools are once established, it will not be so hard for young workers to gain entrance to desirable occupations. Employers may be willing to take on apprentices when they know that the whole burden of training will not

1 "Probably child idleness is a more serious matter in the United States to-day than child labor." *Richard T. Ely.*

fall on commerce and industry; when they know that juvenile helpers will no longer be a static, unskilled element in their labor force.

In a report of the National Society for the Promotion of Industrial Education, we read that the industrial improvement course has assumed and will probably continue to assume the form of an evening school. So long as vocational self-improvement remains optional, this will undoubtedly be the case save where an exceptionally progressive employer coöperates with the educational authorities, as in Ludlow, Fitchburg, Cincinnatti, and Chicago. But should continuation courses be made obligatory, time for them can be taken (as it must be if the best results are to be accomplished) from the working day and such shifts arranged as will not necessitate reduplication of the apprentice force. Indeed, claiming this educational birthright of general intelligence, trade theory and practice cannot be left to unguided whim, which may barter it for a little more ready money, for early independence, for any will-o'-the-wisp of youthful short-sightedness or parental self-seeking. Vocational training must be made obligatory.

XII

CHOOSING A VOCATION

In discussing the difficulty with which youths enter desirable occupations, we have stressed chiefly their lack of training for skilled work. But the difficulty is also traceable to an ignorance of the desirability or undesirability of various occupations, which leads to a short-sighted initial choice and a permanent check in advancement. Ignorant of their mental or bodily unfitness for a trade, thousands of our most promising young people get into uncongenial, spirit-breaking toil, or practically commit suicide by taking up tasks for which their physique is inadequate. Lured by a comparatively high beginning wage, children wander into industrial *cul-de-sacs*, and students estimate that the largest per cent of unemployment is among persons who have been pushed out by the younger generation from trades offering neither prospect of advancement nor training for other lines of activity. English poorhouses are filling with men and women unfitted for any but a pauper's life by their ill-starred at-

tempts at early self-support. The same waste of human resources is apparent in our own country. The Massachusetts Commission on Industrial Education found twenty-five thousand children between the ages of fourteen and sixteen who were engaged in the lowest unskilled forms of industry; and Dr. Kingsbury's investigation into the conditions of their employment showed what a bleak industrial future they could anticipate.

Trade schools of the type suggested in the preceding chapter will only partially obviate the dangers of mischosen occupation. For the child already engaged in a trade where progress is possible, they will open the door to promotion. For the child caught in some mesh of toil with no outlook for the future, they will open the door of escape. But they cannot save children from getting into the wrong job, and conserve the time, ability, and potential accomplishment wasted by our hit-or-miss method of choosing a vocation. No amount of industrial education can fit a child well for something to which he is unadapted, and, until we make sure that our young men and women go into the work to which they are best suited and which will give them the best chance of rising in the industrial scale, elaborate

systems of trade education will not repay the investment which they represent. Trade schools need a supplementary measure to utilize most effectually their possibilities; and this supplementary measure is systematic guidance of youth in selecting an occupation. The boy or girl emerging from the shelter of school life into the hurly-burly of business, needs to be told the facts about openings which present themselves. They cannot judge for themselves because trade has shut itself up in factories with No Admittance signs across the workroom doors. If the child consults an employee as to the nature of a business, he hears of single processes performed day after day without variation — and, considered singly, the processes of one trade are about the same and about as unattractive as those of any other. The child must be made to understand that no employer of high-grade help wants a worker who has spent the formative years of his life as a messenger or errand boy, drifting from job to job and forming irregular, shiftless habits inimical to business efficiency. He needs to be shown the wisdom of starting in a skilled trade at a low wage rather than in an unskilled, blind-alley trade at a temptingly high one. He should also be cautioned against unsanitary occupations.

The immigrant child ought surely to be warned of industrial pitfalls in the trades at which aliens snatch so helplessly while struggling for a foothold on American soil. Such systematic vocational guidance, nation-wide in range of vision, could distribute more rationally our foreign influx, since it is timidity and ignorance of other opportunities which bind immigrants to huddled quarters in seacoast towns. The finer qualities of our immigrant population, those spiritual and intellectual traits which should brighten and vary the pattern of American life, we stifle by thrusting the new arrival into a treadmill of drabbest American toil out of which he comes shorn of most that is foreign and stimulating in mind and manners. The evils introduced into our country by immigration are bruited abroad at the expense of the good, the racial freshness, the poetry, and the peculiar talents which an enlightened policy would cultivate till, under more favorable environment, they blossomed like rare exotics in American gardens. To guide immigrant children into occupations adapted to preserve and develop their valuable racial assets would, perhaps, prove the sanest way of Americanizing our new citizens.

The child not only lacks knowledge of the

different trades, but he needs to be stimulated to think of his own qualifications as a worker. "Know thyself," said the old philosopher, and surely, in the choice of a vocation, self-knowledge is the beginning of wisdom. Yet it would seem that self-knowledge is a lost art of the romantic age. People are interested more and more in outward, objective things, forgetting that things are important only for their value and that value is an expression of personality. An inspiring fact about charitable and corrective work is that it gives us better methods of handling normal individuals. Maud Miner[1] recently said of wayward girls, "All these fallen women have ambitions, ideals, and talents just as have the rest of us. It is the task of the probation officer to get hold of these, quicken them and sustain them till they carry the girl out of her life of shame into one of honorable activity." *Just as have the rest of us!* There is the kernel of significant truth. Who knows what funds of usefulness are yearly squandered in people who come to nothing — good or bad — because their real abilities have never been given proper outlet in activity? And who can hesitate to prophesy that the

[1] Secretary of the Probation Association and formerly probation officer in the New York Night Court.

national happiness and prosperity would be a hundred fold augmented if every human being could industrially find himself and do just that thing he came into the world to do?

Not only what trade the child shall follow, but what further studies, if any, he shall pursue, is usually decided at the end of the grammar school course. Here is the crucial moment when children looking aimlessly for a job can be economically and permanently helped. To the oft-repeated question, "What can the grammar schools do for industrial education?" we therefore answer, not only, "prepare for trade instruction by basic manual training," but "emphasize the fact that school looks toward life rather than toward learning, by directing graduates into a congenial vocation or an institution preparing therefor." Thus should we better the old educational economy, which saved at the spigot and wasted at the bunghole in compelling school attendance and then allowing enormous leakage between school and work.

To guide children in the choice of a career necessitates a detailed, inclusive knowledge of industrial, commercial, professional, and agricultural conditions, which can scarcely be expected of a teacher. Here is the function of the voca-

tional expert. In school activity, as in all fundamental social endeavor, a reliable body of comprehensive statistics as to our industrial situation is thus seen to be imperative. To ground a system of vocational education; to draft a course of study for a trade school; to give the grammar school graduate adequate counsel when he vacillates between idleness, further schooling, or immediate work of a dozen types — to do any one of these things, we must know the facts as to our business world. In every community a thorough investigation of living and working conditions, kept up to date by periodic tallying, would be a paying investment. To its records would go the agitator for factory regulation, the student of woman and child labor, the advocate of a minimum wage, the unionist eager to fix a standard living wage, the Consumers' League preparing a list of fair houses or granting the label to manufactured goods, the housing expert, and the reformer combating the social evil or fighting for more generous recreation facilities. From such a survey, all movements for social betterment would draw the facts whereby to shape their programs. It would keep a steady finger on the pulse of life, and experience in such an investigation would be invaluable training for the various forms of constructive effort, as it

would give balance of mind and insight into the underlying sources of social disorder.

The work of such clearing-houses of information as the Boston Vocation Bureau is described by Meyer Bloomfield in *The Vocational Guidance of Youth*, yet even this Boston bureau feels that the surest way to bring the results of its investigation home to those who need them is through coöperation with the school organization. The central bureau becomes the repository of information; the school authorities are the link which draws together the child and the advisory expert.

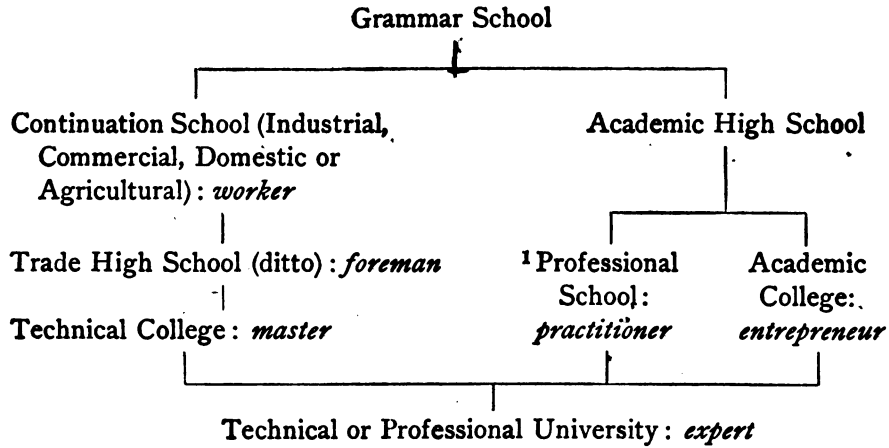
The results of a successful system of vocational guidance will be manifold. Better adjustment of labor to demand, greater satisfaction, efficiency and advancement on the part of the worker, lessened unemployment and labor wreckage, — all begin to attest the value of existing experiments to those directly touched by guidance work. But the most important results come, not from special advice given to individuals, but from bringing the public to consider the relative desirability of diverse occupations. Unprejudiced guidance must mean a partial boycott of undesirable trades, for only inferior workers will seek employment where conditions are dangerous or unsanitary, hours long, wages low, and work tedious. Dissemination

of these facts, now but vaguely apprehended, will enforce, more surely than ill-supported legislation, the installation of safety and sanitary devices and the general improvement of labor conditions. The manufacturer is made or unmade by patronage, and progressive employers, now forced by competition into countenancing labor conditions which they deplore, would welcome enlightened public opinion on these questions, since it would be the final weapon in driving from the field unprincipled competitors. Vocational guidance wisely conducted would prove both an effective means of social conservation, and a potent force in reconstructing industrial standards.

XIII

CONCLUSION

THE term "vocational training" is as broad as life itself, and at the conclusion of this brief volume, we have barely broached the question. Trades are multitudinous; those trades only could be our theme which press upon us most urgently as an educational problem. But the principles evolved for industrial, agricultural, and domestic courses are equally applicable to commercial, mercantile, technical, and professional training. Even within the trades chosen for discussion, there has been a further limitation in treatment. We have dealt principally with the ordinary man; technical schools, whether of high school or college grade, aim definitely to prepare for managerial positions. Yet these higher schools are one in spirit with institutions giving elementary trade instruction; all fit for productive, self-supporting life; all look toward the practical social use rather than the individual acquisition of culture and knowledge. The articulation of the elementary vocational school with a complete system of



[1] Here are included Normal Schools, Schools of Law, Medicine, etc.

vocational education, and the place in this plan for purely academic training is shown by the accompanying tentative outline. Such a schedule is but the world in abstract, a plat of that arterial system through which inspiration and intelligence circulate to every social organ.

The function of this present book, however, is suggestive rather than exhaustive, and its object will have been fully accomplished if, amid the windings of its theme, one dominant idea rises continually to view: the idea of social welfare. This is the touchstone by which the trade school will be tested. Not because agriculture, industry, and homemaking need competent workers; not because vocational training will quicken the artistic sensibilities of our people; not because present schools do not interest our children; not because man has a right to self-support; not because criminals will find in the trade school their salvation; not because women receive from it marital and industrial freedom; not because the unionist sees therein an advantage for his order and the socialist believes it a step nearer the millennium: — but because, from the deeply underlying harmony of these several interests, we infer one mighty common interest for all mankind. The vocational school preserves nor-

mality and efficiency; it strikes to the bottom, and has, in the broad program for social betterment, a central place. Education and legislation: education the creator, legislation the conserver; education the fluidizing, legislation the crystallizing element — these are the only sure instruments of progress. And the real motive power and vital spark lie in education.

Democratic and practical schools for plain men, more than other educational propaganda, contain this potent force for uplift. More than anti-tuberculosis societies, more than scientific charity and correction, more than juvenile improvement clubs, Boys' Scout movements, or any brave enterprise pushing forward alone to the frontiers of regeneration! For in vocational schools, Knowledge comes forward saying, as in the old play, —

> "*Every man*, I will go with thee to be thy guide,
> In thy most need to go by thy side."

They will widen the scope of education to embrace all classes of society, to include those very classes which charitable agencies strive ineffectually, because fragmentarily, to enlighten.

The problem of vocational training is also more profound than preparing men and women to work. It is to educate the public mind, to embody a

working ideal that will gradually transform industrial practice, until labor, no longer cramping and brutalizing, is a beautiful realization of the noblest human possibilities; until the old words of the Benedictine Rule take on their fullest meaning, and to work is verily to pray.

XIV

BIBLIOGRAPHY ON ELEMENTARY VOCATIONAL EDUCATION

In selecting a bibliography on vocational training, one is hampered by the great bulk of material dealing with the topic, and by the endless repetition of subject-matter which this literature displays. Discussion has so far been largely confined to criticism of current educational methods, arguments for the establishment of vocational schools, and general statistics concerning foreign systems of vocational education. The first two classes of articles are as a rule vaguely theoretical, and the last class often fails to give a good working idea, either of a foreign system as a whole, or of just what is done in any particular trade school. Even the detailed descriptions, published in English, of foreign vocational schools are usually unsatisfactory because they give ideals and abstracts of curricula rather than actual classroom methods and their results as a training for subsequent employment. Reliable and complete studies of trade school

results as seen in the subsequent experiences of graduates is lacking for both American and foreign institutions.

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THE IMPROVEMENT OF RURAL SCHOOLS

BY

ELLWOOD P. CUBBERLEY

PROFESSOR OF EDUCATION, LELAND STANFORD JUNIOR UNIVERSITY

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EDITOR'S INTRODUCTION

Our neglect of the rural school

THE rural schools are about to receive from educators the attention that they deserve. The modern industrial city, with its peculiar pathological conditions, has commanded both public and professional interest, but the rural community and the rural school have been neglected. Indeed, in many respects, rural life and rural institutions have lost ground. Relatively speaking, they are not so efficient as they once were.

The rural school and educational progress

It must be apparent to those who have taken the trouble to look closely at the country school that it enjoys no such favor as the ward school of a large city. In neither human nor material equipment does the rural school approximate the resources of a city school. As a rule, the poorly trained teachers are in the country; the best are

in the city. The agricultural community is economically poor; the city is rich in taxable wealth. The country teacher is isolated culturally and professionally; while libraries, museums, theatres, concerts, reading-circles, lectures, and professional meetings are accessible to the city teacher. The rural school-teacher has little chance for help from a superior professional source. Supervision in the country is a formal administrative matter that scarcely takes cognizance of the details of class-room instruction. The cities have supervision, or at least the hope of supervision, for there are supervising principals, supervisors of special subjects, and district superintendents. Thus in more than one respect the rural school has not participated in the fruits of our educational progress.

Disadvantages of the rural school

It must also be admitted that the rural school has been deprived of some of the opportunities for efficiency which once it possessed. Before the growth of cities, the rural school had almost as good a chance to employ the best available

teachers as the village or small town school. The opportunity has greatly decreased under modern circumstances. The country school cannot attract the best-trained teachers. It recruits from the least efficiently trained, and it rapidly loses the more capable and brilliant teachers, who are promoted first to the village schools, then to town schools, and finally to the great city system where pay, tenure, pensions, and the graded school attract them. Thus the rural school-teachers of to-day are as a whole the least experienced and the least competent of the teaching body.

Once the rural school had a farm-owning clientage with a neighborhood interest in the school. Now, in many sections, the taxable population has moved to the town, leaving the children of a more or less foreign tenantry to be educated in the country school. In consequence it takes more effort to create an interest in the school than formerly. The taxable landholders, with a vital family interest in the school, are not there in such large proportion, and the foreign tenant, less enthusiastic about American institu-

tions, is not so eager nor so intelligent in stating his demands for the children.

The need for fundamental changes in rural school administration

It is the business of the educational and the public leaders, whose vision is wide enough to encompass our national welfare, to turn their attention to the improvement of the rural school. The country population has a right to hold its old advantages; it should also have the privilege of participating in the fruits of our progress.

No amount of mere preaching to rural school-teachers will make the country schools sufficiently better. The situation requires economic advantages and social pressure to produce results. Our experience shows that country life and institutions have been modified by far-reaching conditions, — economic, social, political, legislative, and administrative. They must be re-created by the use of the same large forces. If wealth has gone to the cities, at least a small part of their riches must be returned for the education of country youth. This means the abro-

gation of the antiquated principle that schools must be supported by local funds. Expenditure for the education of a boy differs materially from that used for building roads or for maintaining sanitary systems, or for supplying police and fire protection. Road construction, fire protection, and other similar activities are after all more or less local, but the efficiency of a boy has a potential significance for the country at large. Tomorrow he may become a citizen of a town or a city, or of another rural community. Even if he stays at home, he and others like him will be as much the moulders of our national life as an equal number of people in a distant city. The training of country girls and boys is not a local problem; it is a responsibility of the whole state.

The reconstruction of legislative and administrative conditions, which are basic in rural school improvement, is not a simple task. Any policy of reconstruction is simpler and wiser, however, when it is based upon a careful analysis of educational experience. It is because Professor Cubberley has carefully investigated the conditions

underlying the efficiency of rural schools that he has been asked to discuss in this Monograph the measures necessary to effect an adequate improvement in the country school.

THE IMPROVEMENT OF RURAL SCHOOLS

I

THE PROBLEM

THE past decade has been an especially fruitful one in the field of public education. New interest has been awakened, additional support has been provided, many new forms of educational effort have been undertaken, and everywhere questioning and criticism have taken the place of an earlier contentment with existing conditions. Notable advances have been made or begun in many directions. The high school is being reconstructed, and greatly enriched and expanded. The upper grades of the grammar school, long almost stagnant, are being vitalized and are taking on new life. Domestic, industrial, and vocational training are being introduced very rapidly, and in many parts of the country. Mass instruction is giving place to the instruction of

individuals, and the health of school-children is to-day receiving an attention previously unknown.

The country school has not been omitted in this process of reconstruction and criticism, and probably no part of our school system has received more thought and attention during the past decade than has the problem of how to improve the rural school. Probably, also, no part has shown so little improvement. Hundreds of articles have been written, addresses made, and reports printed on this subject. State superintendents of public instruction, county superintendents, normal school presidents, professors of education, and institute lecturers have considered the question, and have proposed ways and means looking to a solution of the problem or problems. Many committees have been appointed to consider the matter. A few citizens, interested in an improvement of rural education, have also taken part in the discussion. Many improvements have been suggested and some have been made, and still the problem remains before us, as yet in large part unsolved.

For a time it was thought by many that an improvement in the quality of the teacher was the key to the problem, and efforts were concentrated on the preparation of a better type of teacher for the schools. This certainly was needed, and there is still much room for further improvement along this line. Teachers' institutes, reading-circles, and summer sessions of normal schools and colleges have rendered valuable services to the rank and file of the teaching body, and have done much to give to new teachers a professional point of view. For the training of new teachers for the rural schools a number of normal schools have, within the past decade, organized rural teachers' training classes, provided a rural observation and practice school, and have offered special courses preparing directly for teaching in the rural schools. In a few states further efforts have been made looking to the preparation of at least a partially trained body of teachers for the rural schools, by the organization of county training-schools, in connection with the high schools. These give a one-year professional course, intended primarily

to prepare for rural school work, and state aid has been offered usually to such schools. A very few states have gone even farther and have ordered that all teachers, after a designated date, must have had some kind of professional training. To provide this a number of institutions within the state have been designated to act as state training-schools, and to offer twelve-weeks' summer courses to prospective teachers. These courses have usually been specified somewhat in detail by the state, and have been intended primarily to prepare teachers better for work in the country schools. The net result of all these efforts has been an undoubted improvement in the mental equipment and the teaching capacity of the teachers in our rural and village schools. The rural school problem, though, still confronts us, and we see clearly that an improvement of teachers alone can never solve the problem. It does not touch it deep enough down.

The next thought was to improve the instruction by modifying and enriching it, and by adjusting it more fully to the needs of country life. This was a fruitful idea. During the late

nineties, a form of generalized nature study was introduced into many rural schools. An attempt has since been made to transform this into instruction in agriculture. Economic needs have greatly stimulated this movement, and no addition to our elementary school system has ever been adopted with the rapidity or the enthuiasm which has been witnessed in the case of agriculture. State and county courses of study have required such instruction to be given, state laws have added the subject to the list of examination subjects for teachers' certificates, and many normal schools have added courses in it to their curriculum. The general introduction of the subject has been so rapid that both normal schools and teachers have found themselves unprepared to give the instruction. The net result, however, has been to awaken a new interest in the rural school, and to reveal more clearly the need of a further reorganization of it.

Manual training, domestic science, and household arts have also been seen to have real value in the education of country boys and girls, but the problem of how to introduce this new in-

struction is still in large part unsolved. In most cases the mere recognition of the need and the value of such instruction has only served to reveal more clearly the utter inadequacy of the present rural school organization to cope successfully with constructive problems. Something has been accomplished, of course, but nothing of what might have been done under a better form of organization and management.

Recently attempts have been made to improve the trustee, feeling that perhaps the source of the trouble lay there. In some states a trustees' day has been set apart in connection with the county teachers' institute, and, in a number of others, within the past four or five years, annual county conventions of school trustees have been provided for. Under the latter plan, one trustee at least from each board is expected to attend, usually a one-day session, and he is paid his expenses and a small *per diem* allowance for attendance. Questions of school management and finance are considered, the aim being to get the trustees present to see and to provide for some of those common needs of the

rural school that, to the county superintendent, are almost self-evident. No doubt much is learned by the trustees present, and the net result probably will be a slow improvement in rural school conditions. But the method is a slow one, and the trustees change about as fast as they are educated.

One of the most serious obstacles to educational progress in the rural schools is presented by these hundreds of school trustees, who, as a rule, know little about educational needs or progress. As a body they are exceedingly conservative, and hard to educate; they usually possess important powers; and, because they control the purse-strings, they frequently assume an authority unwarranted by their knowledge of school work. Whatever is gained through school trustees' conventions is of course a direct gain, but it is a tonic rather than a cure, and no great or rapid progress in rural education, organization, or management can be expected from this source. The problem of the improvement of the rural schools is altogether too deep-rooted a problem to be solved by any such superficial remedy.

IMPROVEMENT OF RURAL SCHOOLS

Something has been done to improve the schools, too, through legislative limitations. In most of the states the old district meeting, once so common, so powerful, and a source of so much ill feeling, has been reduced in functions until an annual school election is about all that is left of it. The power of the district meeting to designate the teacher has gone, and the power of the district trustees to employ almost any kind of teacher at low wages is fast disappearing. Taxation has been changed from a permissive to a mandatory basis, and minimum limits have been specified. The length of term has been increased from three or four to seven or eight months, and districts have been required to meet these conditions. Grading has commonly been insisted upon, and new subjects of instruction have been designated for all schools by general law. The power of the trustees to build any kind of schoolhouse they choose has been taken from them, by laws requiring the approval of plans by the county or state superintendent. In a few of the states, the power to order repairs or to condemn schoolhouses has also been given to these same

school authorities, or to boards of health. The expenditure of funds has been placed under township or county supervision, and limitations in expenses and in the use of funds have been imposed by general law. Permission to introduce high-school subjects, or to abandon the school and transport the pupils, has been granted to the districts, and sometimes used.

All of these limitations of district authority, and each extension of the authority of the county and of the state, have been in the direction of securing more efficient schools for the children in the rural districts and small villages of the state. Some real improvement has resulted from each assertion of the right and the duty of the state, and from each substitution of a larger and a higher authority for that of the district. It is possible to make still further progress along these lines, as will be pointed out later on.

All these expedients, though, have not made progress as fast as conditions have changed, and the rural and small village schools, although undoubtedly better than they were a generation ago, are probably still further behind the average

city school than they were thirty or forty years ago. In any case our rural schools are much poorer and much less effective than they ought to be. Under a better form of organization and management it is possible to make good schools in the country and in villages, as well as in towns and cities, but the changes needed are far more fundamental than are usually proposed.

One mistake that has been made in dealing with the rural school problem is the assumption that it is a problem by itself, instead of being but a part of a much larger problem affecting the conditions of rural and village life. The old conditions which gave rise to the district system, and at one time made the district school and the district meeting such important factors in our national life, have in large part passed away. The same is true of the country church and the country store. The isolation, limited outlook, and restricted markets of the past have given way to larger points of view and to new trade conditions. The telephone, good roads, and frequent and easy means of transportation have put an end to the earlier isolation. Newspapers,

magazines, cheap books, and new political activity have given country people new points of view. The rise of the city as a jobbing centre has opened up new markets, both for sale and for purchase, and has greatly changed the former somewhat even distribution of wealth. The recent improvements in agricultural knowledge have tended to an increase in the size of farms, and, near the large cities, to the leasing of the farms to tenants of large means, who work them in a scientific manner and by means of cheap foreign labor. In many other places the owners move to the towns and cities to enjoy their educational and social advantages, leasing their farms to recent immigrants or to less successful natives. The effect of all these changes is seen in the loss of population in the country districts, in the dying-out of the rural and village churches, in the closing-up of the cross-roads and village general stores, and in the stagnation of the country school. The problem is one of a change in the needs and conditions of all rural life, and the school problem is tied up with the other rural problems.

IMPROVEMENT OF RURAL SCHOOLS

In a few of the more progressive and enlightened communities some marked improvement has been made by means of the consolidation of small schools, and the transportation of pupils to a central school, but the movement, considering the United States as a whole, has as yet made far less progress than its merit warrants. The chief reason for this is that the movement must be initiated and carried through by the votes of the rural residents themselves. This makes it very difficult of accomplishment, because, as a class, farmers and residents of little villages are extremely conservative, unprogressive, jealous, penny-wise, and lacking in any proper conception of the value of good educational conditions. Any progressive proposal is usually met by determined and often unreasoning opposition, and progress by the consent of the voters is a slow and arduous undertaking. Matters involving the fate of nations are often settled more easily than are proposals for an improvement of the rural schools.

The result is that, after almost two decades of agitation, the rural and small-town schools stand

about where they were at the beginning of the agitation for improvement, except in certain areas in a few favored states. The teacher is a little better, and the course of instruction contains a little more that is really worth while, but the school still lacks in almost all of the elements that go to make it a strong educational factor in the lives of country children, or a strong social influence in the lives of country people. The country school lacks interest and ideas; it suffers from isolation and from lack of that enthusiasm which comes only from numbers; and it realizes but a small percentage of its possible efficiency. Its site is usually unattractive; its building is too often a miserable, unsanitary box; it too often lacks the necessary equipment for proper instruction; its instruction is usually limited to the barest elements of an education, and lacks vocational purpose; its teacher is often poorly trained or entirely untrained, and is poorly paid; the supervision provided is utterly inadequate, and usually exists only in name; and the management of the school is often of a very inferior type. The enrollment is usually small, the

attendance is irregular, and the conduct of the school poor. The children, coming from the same little area, and often from related families, bring no new interests to the school. Compared with a good town or city school the country school is poor, often miserably poor, and the numerous classes, overburdened programme, absence of equipment, and lack of ideas and impulses to action offer odds against which the best of teachers can make but little headway. As soon, too, as a school grows sufficiently to make it possible to employ two teachers and to grade the school, the desire to "have a school close to home" leads to the subdivision of the district, and to the creation of two small struggling schools.

Within the past decade the bad results of maintaining such schools, where they can be avoided, has become apparent with new force. The past ten to fifteen years have seen a marked change in the conception of the school itself. The old information conception, with a curriculum limited closely to the old staple common-school subjects, is giving place to a new social, vocational, and economic conception of the

school. It is slowly becoming evident that the rural and small-town schools must adapt themselves to the needs of rural and small-town life if they are to be of real service to their people. The school must evolve into a kind of social centre for the community life if it is to reach its greatest effectiveness, and the teaching and the supervision alike should relate themselves much more closely than they now do to the social life and to the betterment of the community as a whole. The school, too, must offer an enriched curriculum and the opportunity for some increased instruction, if it is to meet the needs of the present and of the future.

The absolute inadequacy of the typical rural school to meet these new social needs, and of the typical rural community to see them and to provide for them, are generally evident. The aid must come through a reorganization of rural education, and this, in part, must be superimposed from above. In the judgment of the writer, this reorganization must take place along three lines.

II

MORE MONEY

THE first of these lines of improvement, and an absolute prerequisite in the case of most states, is a very material increase in the funds available for the maintenance of schools, and the increased funds must be secured, in large part, from other than local sources. Merely to pass laws permitting districts to tax themselves at a higher rate will not provide it. In many communities the rate of taxation for schools is already high, often much beyond what is paid in cities and towns for excellent and complete schools. Still further, the need of increased taxation for education is not apparent to most rural communities, and the tendency of rural people to thrift, economy, and close bargaining is not conducive to liberality in matters of taxation.

It ought not to be the policy of the state to make rural communities tax themselves at a high rate for schools. Probably most rural taxpayers

now pay more than an average rate for education. The burden is much greater when six to eight taxpayers support a two-hundred-and-fifty-dollar school, than when forty to sixty taxpayers support a thousand-dollar school. The best schools to-day are in the cities, and the premium is already too strong on the side of leaving the farm and going to town for the sake of better educational advantages for one's children.

Sixty years ago we fought out the question in this country, and established the principle that schools were to be free and public, and that the wealth of the state must educate the children of the state. The principle was established in theory, and, in part, in fact, in the shape of general taxation, but in many states the general taxation has not as yet gone very far. In a few states it has remained almost entirely limited to the district, town, or township ; while in others a larger conception has prevailed and general taxation of the wealth of each county is the rule. In each case it is a pooling of effort, though the county taxation unit represents a larger and more liberal conception as to the need for and the proper dis-

tribution of the cost of an educational system than does the use of the smaller taxation units. In still other states an even larger and more liberal conception prevails, and general taxation of the wealth of the whole state is the practice, the pooling of effort here taking place on a scale large enough to result in a real equalization of both the burdens and the advantages of education.

The distribution of taxable wealth has changed greatly since the principle of general taxation for public education was first established. Sixty years ago there were few cities of any consequence; the wealth of the country was largely agricultural; the railroads of the country were just beginning to be built, and represented but little taxable property; there were few corporations; the natural resources of the country were almost unworked, and in large part undiscovered; and there were few people who were classed as rich. Wealth and property were still somewhat evenly distributed; undertakings of all kinds were small; and the pooling of effort on any large scale was not necessary.

There is need to-day, in most of the states, for a reconsideration of the whole question of taxation for education, and the apportionment of school funds, with a view to a better equalizing of both the burdens and the advantages of education.[1] The social and industrial changes since the middle of the nineteenth century have completely changed the nature of the problem of school support. If the wealth of the state is to educate the children of the state to-day, the burden of support must be pooled to a much larger extent than is now done in most of our states, and state and county taxation for education must replace, to a large degree, the present very unequal local burdens. Good schools generally are impossible under the local taxation system. It can be shown, for almost any state, that there are communities which are showing an actual decrease in per capita wealth, in the face of a rapidly rising cost for education, while other communities are increasing in wealth at a rapid rate. What one community

[1] For a somewhat detailed consideration of this subject see the author's *School Funds and their Apportionment.* (Teachers College Contributions to Education, No. 2. New York, 1906.)

can do with ease for its children, another community finds it increasingly difficult or absolutely impossible to do. The main reason why Massachusetts, for example, has some of the best and some of the poorest schools in the United States, is that the state has always made each little town pay its own way. On the contrary, the main reason why California has perhaps, of any state in the Union, the best general average of schools throughout the state, with no oppressive educational burdens on any one, is that the state has pooled the support of education on a broad and intelligent scale, generous state and county taxation having practically abolished taxation for support in the districts.

The location of a railroad, a mine, or a quarry; the growth of a city with its markets, manufactories, and stores; the utilization of some natural resource; the location of a factory or of an industry; the advantages of a harbor, a navigable river, or a waterfall; climatic advantages, or a fine bit of natural scenery, developing a tourist resort with big hotels; good soil, with good easy drainage, as opposed to clay and knobs, — these

and many other natural and adventitious advantages tremendously modify to-day the possibilities of maintaining an educational system either wholly or largely by local taxation. One can take a topographic, geologic, and economic map of any state, and mark off the broader areas where good schools may and may not be maintained without material general aid; areas where population probably always will be sparse; areas which are certain to support a large and wealthy population; and areas where the per capita wealth probably always will be small. Yet in all of these communities people live, children grow up in need of education, schools of some kind must be maintained, and future citizens for the state are trained.

It is from state and county taxation, then, rather than from local effort, that the greater part of the necessary funds with which to maintain a good school must, in the future, be derived. From five to six hundred dollars a year is a minimum with which a good school of eight months can be maintained, and this amount, or any large percentage of this amount, is too large to be expected

from district taxation. Many districts cannot produce this sum, and short terms, third-grade certificates, poor teachers, and weak schools are the inevitable results of the attempt to make them produce it. It is only by a state- and county-wide pooling of effort, to maintain what is for the common good of all, that good schools can be maintained throughout a state.

The necessary corollary to any system of general taxation for education is a wise system of apportionment. When taxes for education were first collected, in many states they were given back to the communities which paid them. The state acted merely as a tax collector. A great improvement over this method of distribution was made when the plan of apportioning the taxes, and the proceeds of endowment funds, on the basis of the number of children of school age was substituted. At first this change was stoutly resisted, but the reasonableness of taxing people in proportion to their wealth, and of distributing the proceeds of taxation for schools in proportion to the number of children in each community of school age, caused the somewhat general adoption

of the plan. This change took place shortly after the middle of the last century, and, at the time, the plan seemed so equitable that more than half of the states fixed it in their constitutions. The plan is still used, in whole or in part, by nearly three fourths of the states.

Although the distribution on school census is an improvement on giving the money back to the districts paying it, or apportioning it on the basis of assessed wealth, it is still, nevertheless, one of the poorest and most unjust of all apportionment bases. Yet the census basis is more extensively used than any other. As a basis of apportionment it is unsatisfactory and unjust, and its general abandonment would be in the interests of justice and good education. The effect of a census apportionment is always to make the greatest reduction in the rate of taxation where the tax rate was the least to begin with, and to leave the inequalities greater than they were before the distribution was made. It always favors the towns and cities, where the per capita wealth is greater, at the expense of the rural districts. Calculated on the basis of enrollment or attendance, a cen-

sus basis apportionment is always of greatest advantage in those communities which do the least for their children. Where private or parochial schools exist, it pays communities for the education of children who do not attend the public schools, and for whom the public schools need make no provision. As a basis of apportionment it has no educational significance, in that it does not place a premium on any effort which makes for better educational conditions in a community. Communities are stimulated to get every possible name on the census lists, but there the stimulation ends. If it is worth while for a state to give aid to education at all, then the aid should be given in such a manner, and under such conditions, as will produce the largest educational returns. To stimulate a community to educational activity is much more important than merely decreasing its tax rate, and all aid given should be used as a lever to get as much from the community in return as it is able to give. The census basis of apportionment certainly does not provide for "a general and uniform system of free common schools throughout the state," and no

real headway can be made in easing the burdens of school taxation to small and poor communities, and in equalizing the advantages of education, so long as this basis of apportionment is retained.

Enrollment for a definite period, average daily attendance, and aggregate days' attendance are successively better bases for the apportionment of funds, as each places a larger premium on actual presence in the school. The two attendance bases place a premium, in different ways, on every day's attendance at school, and give communities a financial incentive to do their best every day. The aggregate days' attendance basis places a further premium on lengthening the term, instead of closing the school whenever the attendance begins to drop off, or to suit the wishes of the majority. From the standpoint of the state, the boy or girl most worth paying for is the one who wants to go to school for the longest time.

It can be shown by figures, though, that all of these bases, used singly and alone, are unjust to the small school, in that each entirely neglects the unit of actual cost in maintaining a

school, — namely, the cost of the teacher. The cost for maintaining a school of ten, twenty, thirty, or forty pupils is the same, — namely, the cost of one teacher. Further, it can be shown by figures that, if only one basis for apportionment is to be used, the most just single basis would be to distribute the money to the cities, towns, and districts on the single basis of the number of teachers actually employed, leaving each community to provide what is needed thereafter by local taxation. The teacher basis, though, while most just to all as a single basis, fails to place a premium on any educational effort, except the employing of a sufficient number of teachers, and hence is defective in this respect.

No single basis for apportionment will give as satisfactory results as a combination of two bases, and the best results, it can be shown, still further,[1] can be obtained from a combination of teachers-actually-employed with aggregate-days'-

[1] These matters have all been worked out statistically in the book previously mentioned, to which the reader is referred for mathematical demonstration of these statements, as well as for more detailed reasons.

attendance. Every school, then, regardless of size, receives a unit apportionment for every teacher employed ($100, $200, or more. In California it is $550 for each one-room school), and also a unit apportionment (a certain number of cents per day) for each pupil in actual attendance. With a small reserve fund, as in Indiana and Missouri, to be given to those districts which have raised a certain high rate of local tax and still cannot meet the demands of the state, such a plan of apportionment would come about as near to placing a premium on every desirable effort which communities should be forced to make as any which can be devised. It also, if sufficient general taxation is provided, comes as near to an equalization of educational burdens as it is desirable to do.

It can be shown mathematically that, by a proper rearrangement of state and county apportionment plans, so as to distribute the money with greater reference to both effort and need, it would be possible to increase the school term between one and two months, in a number of the states, with no additions to present funds. By a

further reorganization of the school systems of the counties, as proposed in the succeeding chapters, still greater economies could be effected, and a still longer term of school could be maintained.

Adequate financing and intelligent apportionment, then, lie at the basis of any marked improvement of our rural schools. There must be a doubling of funds, in most of the states, if anything approaching satisfactory results is to be obtained. With better-trained teachers in the cities, good supervision, good equipment, good living conditions, practically permanent tenure, and salaries from six hundred to twelve hundred dollars a year, it is not surprising that the marked educational progress of the past quarter of a century has taken place there. The attempt to manage rural schools on a hundred and fifty to two hundred and fifty dollars a year will never give good results, and one of the first necessities is so to increase the funds at hand that there shall never be less than five hundred dollars a year for each teacher employed. This can never be done, generally, by relying wholly, or even

largely, upon district taxation; or by apportioning funds, when raised, on any basis which does not first recognize the teacher as the real unit of cost of the school. In most of our states there is now needed a new campaign for the proper support of the public-school system, with a new presentation of the present need of a greater equalization of both the burdens and the advantages of education. Accompanying this, two other very fundamental reforms are needed, if the best results are to be obtained.

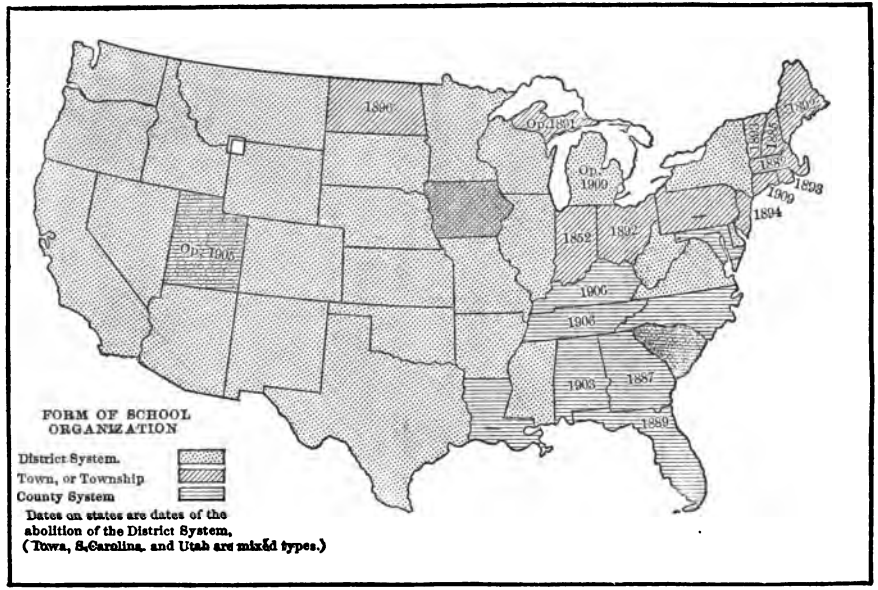
III

BETTER ORGANIZATION

THE second line along which the reorganization of rural education should take place is a reorganization of the whole system of rural school management, to secure a more economical and efficient educational administration.

Three main types of school organization are to be found in the United States, namely, the district, the town or township, and the county. Of these three, the district system is by far the most common, as is seen by a glance at the map on the following page. The dates on certain states are the dates when they abolished the district system.

Under the district system, a small and irregular area known as the school district is the school unit. Each county has from twenty-five to two hundred and fifty such separate and distinct school systems, each with a school board of three trustees or directors, and these are but loosely


1890
Op. 1891
Op. 1900
Op. 1905
1852
1892
1906
1906
1903
1887
1889
1893
1885
1888
1893
1909
1894
FORM OF SCHOOL ORGANIZATION
District System.
Town, or Township
County System
Dates on states are dates of the abolition of the District System,
(Towa, S.Carolina, and Utah are mixed types.)

coördinated under a county superintendent as parts of a county and state school system. Under the town or township system, the town or township is the unit, and the schools of the town or township are managed by one central school authority. Under the county system, all of the schools of the county, large cities under separate boards excepted, are managed as a unit by a county board of education, just as all the schools of a city are managed as a unit by a city board of education. Of the three types, the district system is the most objectionable, and the county system has the most to commend it.

The district system originated in Massachusetts in the eighteenth century, and in response to peculiar local needs which no longer exist, and was carried westward in the early nineteenth century by New England people. Being well adapted to primitive conditions, and to schools of meagre scope, the district system no doubt once rendered a useful service. It was best adapted to a time of isolation, limited vision, and to the day of small things and petty interests. As a system of school management it is unadapted

to the business or the educational needs of the present or of the future; it is inefficient, inconsistent, unintelligent, unprogressive, and expensive; it leads to the multiplication of small and poor schools, and to the building of an unnecessary number of small and cheap schoolhouses, and, when population has increased sufficiently to warrant consolidation, the natural envy, jealousy, and ultra-conservatism of the different districts stand as a block in the road of educational progress. It has been condemned generally by school officials for forty years, and the chief reason for its extensive retention is that the people in many states have never known any other system.

There is no educational or business need for the large number of school officials made necessary by the district system. In Illinois, for example, about forty thousand district trustees (called directors there) and township officers are necessary, by the law, to carry on the rural and the ungraded schools of the state, though only about twelve thousand teachers are employed, less than that number of schools are maintained,

and the total cost for maintenance is only about three million dollars a year. This is about one trustee for every seventy-five dollars of school expenditure, while the city of Chicago looks after the educational and business affairs of a complex city school system, employing over six thousand teachers, and costing over eight million dollars a year, with a board of education of twenty-one, and probably could do it still better with a board of seven or nine. Had Chicago continued to retain the district system, that is, a board of three school trustees for each school maintained, which was the plan followed from 1835 to 1857, there would now be required about two hundred and seventy-five different boards of school trustees for the city, and the resulting confusion would be almost inconceivable.

What is true of Illinois is equally true of many other states. Michigan requires about twenty-five thousand trustees, and Detroit eighteen; Missouri about twenty-eight thousand, and St. Louis twelve; and Kentucky, at the time of the abolition of the district system (1906), "had eight thousand three hundred and thirty districts

and twenty-four thousand nine hundred and ninety school officials, with no unity of purpose and no proper conception of the aim and scope of popular education." Educational progress, under such a system of management, must of necessity be exceedingly slow, and schools under such control cannot be expected to advance at a rate demanded by the changing economic, social, and educational needs.

The argument that these boards of trustees represent closely the wishes of the people reveals the weakness rather than the strength of the system. Country people are, as a rule, ultra-conservative, economical, and sadly lacking in educational progressiveness. New ideas come to them but slowly; what has been for a long time is good enough. No better evidence of this is needed than the stubbornness with which the consolidation movement has been resisted by country people, and the chief progress of the movement has been made in states which have previously abandoned the district system. The schools, if improvement is to be made, must frequently take a position in advance of the people

and wait for good results to justify the position, but the ability to do so is frequently impeded by conservative and unintelligent boards of district school trustees. Progress by concurrent action is hard to get; trustees frequently assume authority over matters of which they are relatively ignorant; and nearly all important progress in the improvement of rural schools has been made by first curtailing the power of the district school authorities.

The system is both expensive and inefficient, because it leads to the multiplication of many small and unnecessary schools, and because these schools form no part of a comprehensive scheme of rural school education. In almost any reasonably well-populated county, operating under the district system, a rearrangement of the schools could be made, by competent educational authorities, which would provide much better educational facilities and at the same time dispense with the services of from twenty to sixty teachers.

As it is to-day, each little rural school stands alone, and provides the bare essentials of an education only. It does little to prepare its pupils

for intelligent participation in rural life, to train them for the vocations of country people, or to offer to them the advantages as well as the essentials of an education, and it cannot provide secondary training for them. Manual training and carpentry, mechanical drawing, domestic science, household economics, millinery, dressmaking, nursing, the care of the sick, gardening, and the elements of agriculture, it is practically impossible to teach in the little school of fifteen to thirty children. Not only is there not time for such subjects, but the money usually at hand is not sufficient to buy the services of a teacher competent to offer such instruction. The cities, alive to the value of such instruction, are offering it to their grammar-school children and paying high prices to get teachers who can teach such subjects. But the small country school continues to provide the cheapest form of book education, and to prepare its pupils for city and professional life, rather than for rural and vocational life. This condition will not be greatly different so long as the district system of school control is continued.

The rural school, too, ought to lead in an unbroken sequence to a high school, of some kind, for all country children. This it usually does not do to-day. The rural, and even the village district, are too small units to warrant the establishment of a high school, and admission to town and city high schools must be asked for and paid for on a tuition basis. By a proper reorganization of the rural schools it would be possible to provide much better educational advantages in the elementary grades, and high-school privileges for all, at no materially greater cost, and with the use of fewer but better teachers than are at present employed.

Efforts have been made to improve the rural schools by means of laws permitting of the consolidation of schools, by the voluntary vote of the districts concerned, or by action by the town or township authorities. Some marked progress has been made in a few states, but almost without exception they are states which earlier have abandoned the district system. In the district-system states the movement has awakened but comparatively little interest, and in some of the

district-system states it has been impossible even to get laws permitting of consolidation through the legislature. In other such states the laws have been passed, but almost no use has been made of them.

Yet in the abandonment of the little district school, except for isolated pupils or in sparsely settled areas; in the organization of a well-planned series of consolidated central schools, with connecting high schools; and in the making of these consolidated or central schools centres of a new rural community life, lies, in large part, not only the solution of the rural school problem but the solution of the rural community problem as well. Only in such schools can the kind of education demanded by modern conditions be given, and only at such points can community centres be established which will serve as rallying-points and tend to conserve and unify country life. To expect such centres to be organized voluntarily by country people is to expect almost the impossible. To most country people an ocular demonstration is needed to convince them of the value of almost any new proposal.

The lack of coördination and coöperation between the districts is one of the most serious obstacles to the consolidation movement. The different boards of school trustees of the forty to two hundred school districts of an average county have no organic connection, and the people they represent are often swayed more by envy and jealousy — personal, political, religious, social, economic — than by all of the educational arguments which can be advanced. A dog-in-the-manger spirit is often in evidence, and jealousy of the proposed concentrating centre is often a strong factor in producing unfavorable action.

Under most existing laws propositions for consolidation must be initiated in the districts, petitioned for, and then submitted to a separate vote in each of the different districts. Consolidation, under such circumstances, is accomplished only with the greatest difficulty, and often only after repeated trials, and it frequently results in the union of only the more progressive districts, with the result that the union formed is too small. Consolidated schools formed thus by district ac-

tion bear little or no relation to one another, and lack the wisdom as to size and location of the school which would come from the adoption first of a comprehensive plan, worked out for the county as a whole.

The town or township unit offers many advantages over the district, but, except in very thickly populated regions, it is too small to admit of the best results. Very often the best arrangement of consolidated school lines, too, will follow topographic features rather than township lines, and again the congressional township area (thirty-six square miles) will also at times prove too large for one school. This is well shown on the Minnesota map, printed on page 46. The county offers a much better unit for almost all kinds of school organization, and the general adoption, outside of New England, of the county as the unit for school purposes would be greatly in the interest of economical and efficient administration. In most other public functions, — assessment and taxation, poor-relief, roads and bridges, sanitation, control of the liquor traffic, the administration of justice, and, in some matters, for schools also,

the county is the prevailing unit, and to add the schools to the list would be a good addition.

The central features of a good county plan of school administration are a county board of education, representing the people, with the county superintendent of schools as their executive officer. This board would have supervisory control of all of the schools of the county, cities under city boards of education excepted, and would have power to arrange and rearrange school districts; to form union schools and consolidated central schools, and to provide transportation; to provide high schools for all; to employ, fix the salaries of, and pay all teachers and employees; often to adopt the course of study, add other branches, and designate textbooks; to enforce the compulsory attendance laws; to determine, within fixed limits, the county school taxes; and to exercise a general supervision over the schools of the county, analogous to that exercised over the schools of a city by a city board of education. The schools of the county are thus managed as a unit; school taxes and school privileges are equalized all over the county; good, well-taught

elementary schools, with a rich curriculum and maintained for a uniformly long term, are provided at each central school; all districts are parts of organized high-school territory, and hence high-school advantages are provided free to all; and county attendance officers, with a county parental school, carefully enforce the compulsory attendance laws.

A local school officer or officers (trustees) would still exist for each single, union, or consolidated district, but the number of such in a county would be greatly reduced, and their powers would be somewhat closely limited. They could well be entrusted with the care of the schoolhouse, providing of fuel and supplies, handling of severe cases of discipline, acting as a means of communication between the people of the district and the county school authorities, and in expressing for the district its preference as to the persons to be employed as teachers. These are legitimate functions to be retained by local school authorities. What would be taken away from them are functions which district authorities are no longer competent to exercise,

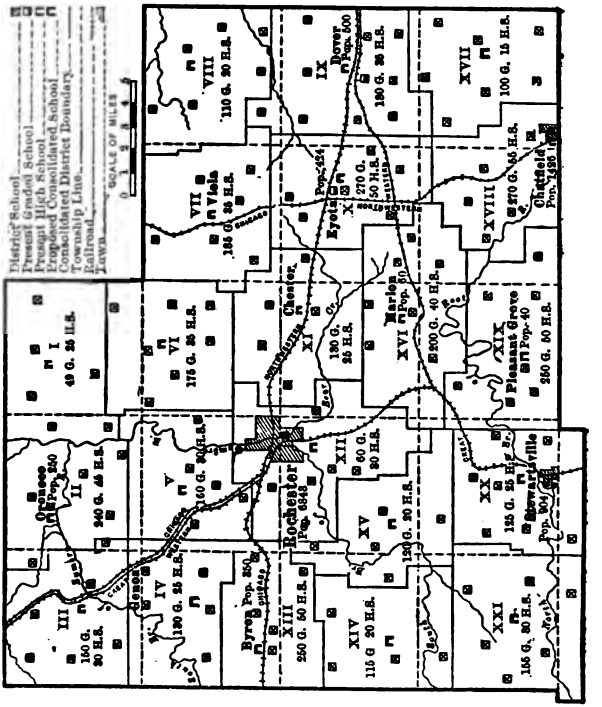
which they have lost in some states, and which they ought everywhere to lose. Such powers as the classification of the school, adding or reducing the subjects of study, selecting textbooks, examining and supervising the instruction, employing and dismissing teachers and driving bargains with them as to salary, determining tax rates (except by vote of the district for building purposes), handling district funds, keeping district accounts, and incurring expenses, except as authorized, are powers which it will be well for the schools if the present district authorities should lose. These are not functions which the people of each city ward or schoolhouse district think it necessary to be allowed to exercise, and there is little argument, other than three generations of practice, why the people of rural school districts should. All of the powers mentioned above can be handled better by central expert authority, as will be pointed out more in detail in the next chapter.

The accompanying illustrations show how such a plan would work out in two counties. The Minnesota drawing is a hypothetical rearrangement,

the location of all of the little rural schools now existing being shown, as well as the new consolidated schools. On this plan it will be noted that the best rearrangement of lines does not follow the township lines. The Florida drawing is an actual case, the thirteen consolidated schools having replaced all of the little rural schools, except those in one district.[1]

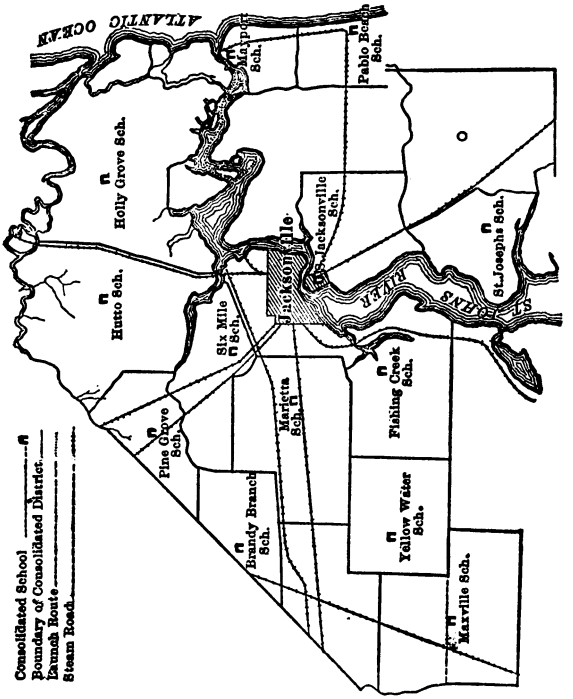
What we have, in each of these cases, is the provision of a well-organized system of schools for the county as a whole, with graded schools, a rich and useful curriculum, and high-school advantages for all. The main difference between either and a city school system is that it is spread out a little more, but the advantages which may be offered the country child are practically the same as in the city. Instead of the little, lonely school, with its handful of children, numerous classes, meagre curriculum, over-crowded programme, and lonely, town-sick

[1] An excellent little book on this subject is *Consolidated Rural Schools, and Organization of a County System*, by George W. Knorr. (U. S. Dept. of Agriculture, Experimental Station Bulletin No. 232, 99 pp., illus., 1910.)



MAP OF OLMSTEAD COUNTY, MINNESOTA, ILLUSTRATING POSSIBLE CONSOLIDATION. (AFTER KNORR.)

Area of county, 644 square miles; number of rural schools, 139; number of graded schools, 3. Note how the heavy lines, representing the best districting for consolidated schools, vary from the light township lines, and that 21 districts are required to provide properly for the 18 townships. The numbers before "G." and "H. S." denote probable enrolment in the grades and the high school for each consolidated school. Under this plan 21 strong, graded, consolidated schools would replace the 142 graded and district schools now existing. Not counting additions for high school instruction, about 30 teachers for elementary schools could be saved, and counting the high schools the new plan could be carried out with no increase in the number of teachers employed.



MAP, SHOWING CONSOLIDATED DISTRICTS AND LOCATION OF CONSOLIDATED SCHOOL HOUSES, IN DUVAL COUNTY, FLORIDA. (AFTER KNORR.)

Area of county, 884 square miles. Location of future consolidated schools shown by a circle. Two launches are used in transportation, in addition to twenty-eight wagons, all owned by the county.

teacher, there is a school graded into from three to eight classrooms, enough pupils to awaken a real interest, an enriched curriculum and special teachers, a principal and a group of teachers less lonesome and less anxious to get to the city to teach, part at least of a high-school course, and a school that will awaken community interest and pride. By building a proper building, as can be done with the larger taxable area to pay for it, a building can be provided which is not only modern, well-heated, and thoroughly sanitary, but one which will contain a library room, a manual training and carpentry room, a domestic science and household arts room, and ground opportunities sufficient for good instruction in agriculture. By adding an assembly hall of sufficient size, with stage, movable seats, piano, and stereopticon, which can be done at but small extra cost, the school could become what every consolidated or central school should become, a permanent educational, intellectual, and social centre for the people of the enlarged school district, a rallying-point for the people of the community, and a strong unifying force in country life. Lectures, entertain-

ments, public meetings, discussions, debates, exhibitions of school work, local institutes, and social gatherings could then be held at the central school, the same wagons which bring the children to school in the daytime serving to bring their parents at night, or at other times. Traveling and branch libraries may here find a home. The different movements for the socializing of country life and the socializing of the rural school here meet on common ground.

The plan for the reorganization of county and small-village education here outlined really provides for offering to country people practically as good educational advantages as are possessed by city people, at no greater cost, and with the advantage of the country to live in. It means the making-over of the rural schools by incorporating into their curricula the special advantages now possessed by the cities, and into their organization and management the best city administrative experience. To conceive of the plan in its details and to see its advantages requires more imagination than country people usually possess, and, with the change which in many places is

taking place in the character of the country people, more than we can expect these new classes to have for some time to come. If the country school is to be revitalized in any such manner and made into a social instrument adapted to present educational and economic needs, it will have to be accomplished largely by the interposition of the state. If we wait for action by those who now apparently seem so satisfied with the district system, we shall wait another generation or two before any marked results are achieved.

There are three main ways of inaugurating the county plan of school organization.

The first way is by a county commission, as in Minnesota. Under this plan, on a petition of one fourth of the electors, the county commissioners appoint a rural school commission of seven, one of whom shall be the county school superintendent. This commission proceeds to redistrict the county, prepares and publishes a map of the same, and an election is called to decide the question. Progress under this plan probably will be slow, and many opportunities are presented for the defeat in the election of any really good plan

proposed. The second is by an optional adoption by counties, first, of a county plan of school organization, with a representative county board of education, as in Utah, and then afterward proceeding to the organization of the county into consolidated districts, as has been done in Florida. The third plan is to legislate for the state as a whole at once, as was done in Kentucky and Tennessee, create a county board of education to take charge of the schools of the county, reduce the school districts to subdistricts and deprive them of all except legitimate functions, and give to the county board of education power to consolidate schools and to transport children. Maryland, Alabama, and Louisiana offer good types of this form of county school organization. Similar powers are possessed by the town school authorities of the Massachusetts and Connecticut towns.

The exact plan to be followed is less important than the attainment of the result. Efficient rural school organization and control will be promoted in proportion as the central control of the county is substituted for the control by the districts. With county control provided for, one additional reform becomes necessary.

IV

BETTER SUPERVISION

THE third line along which a reorganization of rural education should take place, and a corollary to the second one, is the provision of close, adequate, and professional supervision for the rural schools. The supervision which exists today, except in Massachusetts and in a few favored towns and townships elsewhere, exists much more in name than in fact.

It is here that the cities again have a great advantage over the small-village and rural schools. With their superintendents, special supervisors, and supervising principals, the cities look after their instruction with a care and a thoroughness unknown in rural schools. Yet it is in the cities that most of the trained and experienced teachers are found, while in the rural schools nearly all of the untrained and the inexperienced, and most of the poorly educated and comparatively unsuccessful teachers find either their starting-point or

their haven of rest. In the better-managed cities, if trouble arises, or if a teacher proves weak, close attention is at once given to the case, and the teacher either is improved by helpful suggestions or assistance, or is soon removed from the position. In the rural and the village schools, difficult situations are allowed to become aggravated, and poor teaching to become cumulative. Often a whole year in a child's education is wasted, or worse than wasted, because of a poor teacher and the lack of real supervision.

State laws generally require a county superintendent of schools to visit each school in his county at least once each year, and some superintendents try to visit each school twice. This, though no doubt useful, particularly to the superintendent, is of little value as professional supervision. Institutes and examinations make up about all else that there is of a supervisory nature. So large is the office work — legal, financial, statistical, clerical, and political — that a superintendent has little time for anything more. As the work of a county superintendent is at present laid out, from two thirds to four fifths of

his time is devoted to other functions than school supervision, and these other functions tend constantly to increase.

The office arose early in the evolution of our state school systems. The chief functions at first were to look after the school lands, to stimulate an interest in education, to gather information, and to make reports as to the establishment of schools. In a few states the superintendent was evolved out of the township superintendent, created early in our development; in others, out of a school land commissioner; in others, as an offshoot of some other county office, and by a division of labor; and, in still other states, the superintendency has evolved out of a board of county commissioners. By the time the newer states west of the Mississippi River were formed, the office had been created so generally as to form a type, which was generally copied.

Everywhere the office, at first, was almost entirely a statistical and clerical one, and this side of the work has been greatly added to by the tendency, manifest in marked degree during the past quarter of a century, to transfer power

and authority from the district school boards to the county and state educational authorities. The office was created to represent the authority of the county and the state, distinct from the district authorities on the one hand, and the teaching body on the other. The analogy to other county officials was evident; election by the people, for short terms, seemed the natural method; and this plan, once begun, still persists in about three fourths of the states having such an officer.

Within recent years, coincident with the evolution of the many new social and educational problems, the expansion of the curriculum, and the development of a professional conception of the work of supervision, new conceptions as to the nature and duties of the office have come to the front. New professional obligations and responsibilities have been added, and insisted upon; new standards of admission to the work have been set up; the demand for some real supervision for the rural schools cannot be much longer resisted; and, generally to-day, there is a feeling that the office must soon be placed

upon a professional rather than upon a political basis.

Efforts to solve the problem of adequate supervision for the rural schools have, for a long time, been made along a number of lines. Perhaps the one attempted most has been that of trying to secure deputy superintendents, to assist the county superintendent in the work of supervision, or clerical assistance to enable him to dispense with some of his office work. Excepting in a few large counties, these efforts have so far met with but little success. The county supervisors (or commissioners), it is evident, will not voluntarily provide such deputies or clerks, and the superintendents so far have not been able to prevail upon the legislatures to compel them to do so. The complaints as to needed assistance, with which state school reports abound, and the low salaries paid to the county superintendents all over the United States, give abundant evidence that the office, as it now exists, has not as yet established itself very deeply in the hearts of the people. In almost any county-seat city the superintendent of the

city schools and the principal of the high school are paid from one and a half to three times as much as is the superintendent of the county schools, are better provided with clerical assistance, and either of the two former positions is generally looked upon as much more important, educationally, than is the county office.

Another line along which it has been thought possible to provide supervision for the rural and town schools has been by legislation permitting groups of districts or towns or townships to unite in a union to employ a supervising principal. This is the plan which has been followed by Massachusetts in dealing with its towns. The towns there were first permitted to form such superintendency unions, then they were given state subsidies if they would do so, and finally the recalcitrant towns were forced to unite and to provide proper supervision for their schools. The plan of unions for supervision has been employed also, to a limited extent, in some of the township-unit states, though the township itself has formed the most common supervisory unit. Voluntary unions in district-system states are almost un-

known, and it is useless to expect many of them to be formed. The same difficulty is encountered here as in the consolidation movement, — the difficulty of obtaining the consent of so many small, mutually jealous, and penny-wise school-district boards. United action by district authorities is next to impossible, and it is futile to hope that adequate supervision will come from this source.

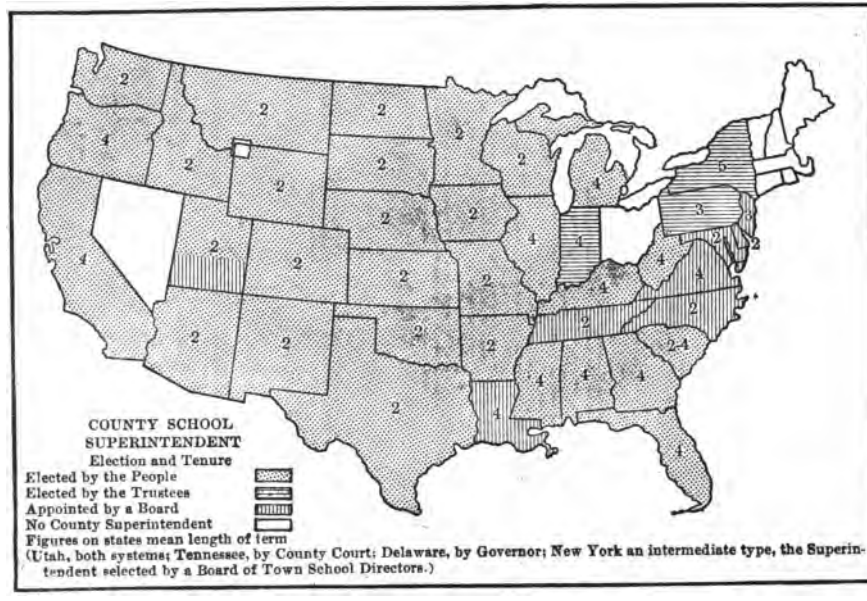
The solution of the problem of providing adequate and professional supervision for the rural and village schools lies in another direction, and that is in the divorce of the office of county superintendent from politics, in the removal of the office from the elective column, and in the adoption of an efficient system of county school administration. It is useless to expect a very much better quality of county supervision than we have at present so long as we permit the Republican and Democratic parties to select our superintendents, and chiefly on the basis of political affiliation and local residence. Neither can we expect much greater popular support for the office until it ceases to be a closely protected

local political industry, and is opened up to the free competition of men and women of good educational preparation and experience.

Once place the office on an educational, instead of a political basis; make it possible for men or women from the outside to be considered for the office; make the retention of the office dependent on good service, instead of the party caucus or the popular whim; place a premium on accomplishment and service, rather than on trying to keep on the good side of the electorate; and open the office as a possible career for which men and women would be warranted in making careful professional preparation; and the poor conditions now surrounding the office would rapidly change. Under the same freedom of selection and competition for men as now exists for city superintendents and for high-school principals, the character of the men engaged in county supervision would rapidly improve, competition of counties for men would follow, the salaries offered would soon double or treble, clerical assistance would be easily obtainable, and men and women who now prepare themselves for and go into

city or high-school work would turn to county supervision as a useful and influential field of labor.

As it is to-day, the office offers no career to any one, and the real merit of a man frequently has little or nothing to do with either his selection or his retention in office. After a man has learned his work and come to like it, he is altogether too often defeated for renomination or reëlection by the enmity of the party bosses, by some slip or trade in the political convention, by some unforeseen accident during the campaign, by the more effective canvass of a "glad-hander" or "gallery-playing" opponent, or by a general party landslide. Too often the superintendent who attends strictly to his business does so at the expense of his political prospects, and the superintendent who does his duty, especially in the states where the district system is still strong, is frequently marked for defeat by the enemies he has made in the districts. The vicious political principle of rotation in office also helps to eliminate good men. After one or two terms in the office a superintendent's career is usually ended, similar


COUNTY SCHOOL
SUPERINTENDENT
Election and Tenure
Elected by the People
Elected by the Trustees
Appointed by a Board
No County Superintendent
Figures on states mean length of term
(Utah, both systems; Tennessee, by County Court; Delaware, by Governor; New York an intermediate type, the Superintendent selected by a Board of Town School Directors.)

employment elsewhere is impossible, and he commonly leaves school work entirely.

There can be no question but that the short tenure of office, the low salaries, the local residence requirement, the political aspect of the office, the public notoriety attached to candidacy, the long campaign, and, under the new primary election laws, the double campaign, the expense of securing the office, the uncertainty of election, and the humiliation of defeat, together tend to keep the best men in the teaching profession out of the office, with the result that the average county superintendent of to-day, with full allowance for exceptional cases, represents an inferior quality of professional leadership compared with what might be had under more favorable conditions. He is much more frequently a routine worker, a strict constructionist, and a good, conscientious clerk, than a man of insight, imagination, and educational grasp, who works in the light of established principles and sees the ends behind the means.

The fault lies, though, not so much with the men who hold the office as with the system which

produces them. The men we have to-day as county superintendents are, averaged up, perhaps the best the system has so far produced. It is the system itself which is fundamentally wrong. Potentially, the office is one of large possibilities. County supervision ought to attract as capable men as does the city school service, and it ought even to compete with the cities for men. As it is to-day, however, the political and residential tariff leveled against training and competency is practically prohibitive, and county school supervision, in most states, is to a very large degree merely a closely limited local industry, offering only temporary employment to the few who are willing to consider political candidacy.

The disastrous results of the present political system may perhaps be seen best if we imagine the county system applied to the school systems of our towns and cities. Even those county superintendents themselves who loudly espouse the present plan, would not advocate so disastrous a change. We can at once imagine the demoralization which would follow if our city superin-

tendents, high-school and grammar-school principals, and town supervising principals were to be selected always from among local residents, by nomination on party tickets, and by popular election. The introduction of such a vicious system would soon ruin the schools and quickly drive the best men out of the work. Yet, if it is right and wise to vote for one, it is right and wise to vote for all; and if it is wrong and unwise to vote for one, it is wrong and unwise to vote for any one. The positions and the nature of the work stand on a par with one another, and the poor quality of the supervision of our country schools, and in the two cities in the United States which still retain the elective method, stand as abundant evidence that the plan of nomination and election, instead of selection and appointment, is both wrong in principle and against the best interests of education.

It is easy enough to make almost any one recognize the serious limitations under which the office labors to-day, excepting the county superintendents themselves. Hope springs eternal in the politician's breast, and, in possession

of the office, with its political prestige and power, he thinks he can get it again, disregards all evidence and argument, and goes to the legislature and helps to defeat all measures looking toward real improvement of the conditions surrounding the office. The most serious obstacle to the improvement of county school supervision to-day is the county superintendent himself. Many of them befog the issue as much as possible by loud talk about their faith in the judgment of "the toiling fathers on the hillsides," and of the ability of the "people to guard the interests of their homes and schools," and ignore the real question and the far-reaching significance, for country people and country children, of the reforms proposed. A few of the county superintendents see the significance of the proposals, both for the schools and for the superintendents themselves, and do what they can to advance the movement, but they are as yet in a hopeless minority. Most county superintendents can see nothing in the plan, — until some one else gets their office.

The county superintendent, in his evolution, was the real beginning, in most states, of a

county as opposed to a township or a district system of school administration. He deals with the county as a whole, and the gradual transference of powers to his office from the district school authorities, tends constantly to build up the county unit at the expense of the district. Under an educational organization closely analogous to that of the cities, the transference of power and authority to his office would be rapid, and an efficient county system of school organization and administration would rapidly evolve. The system of county-unit organization, outlined in the preceding chapter, can never be complete until the county superintendency is changed from a political and elective to an educational and appointive office. The completed plan would then be somewhat as follows: —

The people, preferably at the spring school-election time, would vote for members of a county board of education, to represent them in the management of their schools. These members might be elected by commissioner or supervisor districts, if this were thought desirable, but better representatives and better results would be

obtained, ultimately, if they were elected from the county at large. A board of five is both large and small enough, and it would be well if one member were elected each year, for a five-year term. Three-year terms might be provided, the annual elections being for two, two, and one; or four-year terms, with three and two elected biennially. This detail is not a vital one, so long as a continuous body is provided for. This gives the people five persons, presumably taxpayers and parents, to represent them, in place of the one county superintendent they now elect. This county board of education thus becomes a body analogous to a city board of education, and should be given similar powers and duties.

The county board of education now takes charge of all the schools of the county, not under separate city boards of education, and manages the schools of the county as a unit, as outlined in the preceding chapter. It appoints the county superintendent of schools, and, on his recommendation, assistant superintendents and special supervisors, as needed, just as city boards of education appoint similar officials. In selecting

the county superintendent, his assistants, and the special supervisors, the county board is free to go anywhere for them, within or without the state, so long as the persons selected possess the requisite educational preparation and professional certificates. The board also fixes their salaries, free from any maxima or minima set by law, the object being to enable the boards to compete freely in the educational markets for men and women of training, educational insight, and executive skill. This makes the county the competitor of the city, as well as of other counties, and enables the county to secure the services of the best men obtainable for the money it can pay.

The board also organizes the business, legal, and clerical affairs of the office under a combined clerk and business manager, as is done in the cities, or under an assistant superintendent, who devotes his time to the work, thus freeing the superintendent from the necessity of spending his time in routine office work. The board is to be the sole judge as to the number of assistants, clerks, stenographers, etc., necessary to con-

duct properly the business of the office, and of the salaries to be paid such employees.

After considering such recommendations as the trustees of the different single and consolidated districts care to make, the county superintendent recommends to the county board for approval all the regular and special teachers needed for the schools under its charge, the board fixing their compensation. If no state course of study or state adoption of textbooks is in use in the state, they are to adopt these, on the recommendation of the superintendent and his assistants. The board may make rules and regulations, not inconsistent with law, for the management of the schools under their charge; may, on the recommendation of the superintendent, suspend or dismiss teachers, for cause; may appoint county truant officers, and establish a county parental school; may issue, on the recommendation of the board of superintendents, such teachers' certificates as are authorized by general law; may alter the boundaries of school districts, consolidate schools, and provide transportation; and shall, within the limits fixed by law, deter-

mine the annual county school tax, and certify the same to the proper authorities for levy, and this without review by the county commissioners, or supervisors. The board's functions are to be legislative, but not executive.

The number of assistant superintendents, teachers, and supervisors of special subjects to be appointed for the schools of the county may be left to be determined by the board, or may be fixed by general law, but should be enough to teach and supervise properly the schools of the county, and on approximately the same basis as city schools are taught and supervised. The county superintendent should visit all of the schools of his county. His assistants, when the county is large enough to need them, may supervise districts, or certain school grades, as the superintendent or board may direct.

So far as possible, the superintendents and his assistants should identify themselves with the needs and interests of the county, or parts of the county, which they are to supervise. By personal conference, occasional public addresses, articles and news notes in the local papers, the superin-

tending body ought to help to mould and to advance community sentiment with reference to education. In case of need it ought to be possible for a supervisor to spend days at a time in a school, and the visits in any case ought never to be more than a few weeks apart. It should be the particular business of the supervisors to try to make good teachers out of the material at hand; to single out promising ones, and promote them and encourage them to advance in knowledge and training; to guide the schools in organization and management, and to develop the educational system of the county as fast as the people can afford, and as far as is consistent with sound education. From time to time conferences with the teachers should be held as to methods and results. For such work men and women are needed who possess generous personal culture, liberal views, good pedagogical training, satisfactory teaching experience, good common sense, and a knowledge of and sympathy with rural conditions, people, and life. To secure such persons, not only must good salaries be paid, but the conditions surrounding the entrance upon

and continuance in such service must be satisfactory.

Combine the three lines of improvement presented in this and the preceding chapters, and we have the main lines along which real improvement of our rural and small-town schools will need to be made. A county unit of organization and administration, with a county school board representing the people; supervision placed on an educational, instead of a political basis, and made effective; the subordination and consolidation of the districts, on the initiative of a central authority, and according to a constructive and unified educational plan; adequate funds for the necessary support of schools, drawn from state and county taxation, with permissive local taxation for buildings and extra educational efforts; and a system of apportionment which recognizes the unit of cost of the school, and which places a premium on efficiency and attendance; these are the main essentials of the plan. It closely resembles the organization found most effective by the cities, and aims to produce a school system in the country as effective in pre-

paring for country life as the city schools are in preparing for city life. There can be little doubt that such a central board, composed of citizens of the intelligence, ability, and personal character necessary to secure election at a time when partisan politics and party tickets do not cloud the judgment, and dealing with the county's educational needs as a whole, would provide much better schools for all than ever will be done by district authority.

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